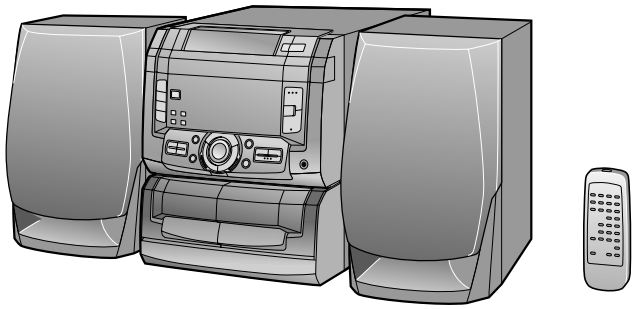
SHARP SERVICE MANUAL

No. S7853CDC413H/



CD-C413H

CD-C413H mini component system consisting of CD-C413H mini component system and CP-C413H speaker system.

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.

NOTE FOR USERS IN THE U.K.

- Recording and playback of any material may require consent, which SHARP is unable to give. Please refer particularly to the provisions of the Copyright Act 1956, the Dramatic and Musical Performers Protection Act 1958, the Performers Protection Acts 1963 and 1972 and to any subsequent statutory enactments and orders.

This new model CD-C413H has almost the same structure as the former models CD-C411H except for some outer parts, the speaker Box has been changed, and so only these parts are here described. When servicing the CD-C413H, please refer to the already issued service manual for CD-C411H (S5834CDC421H/) as well as this service manual.

DIFFERENCE BETWEEN CD-C411H AND CD-C413H

REF. NO.	PART NO. ★ CD-C411H		PART NO. ★ CD-C413H		DESCRIPTION	CODE
CABINET PARTS						
201	92LCAB2829AS1	J	92LCAB2947AS1	J	Front Panel A'ssy.	BD
206	GCAB-1050AWSB	J	GCAB-1050AWSC	J	Top Cabinet	AQ
207	GCOVA1186AWSB	J	GCOVA1186AWSC	J	Cover,CD Tray Panel,Left	AF
208	GCOVA1187AWSB	J	GCOVA1187AWSC	J	Cover,CD Tray Panel,Right	AF
209	GCOVA1215AWSA	J	GCOVA1208AWSA	J	Cover,CD Tray	AF
210	GDORF0054AWSB	J	GDORF0054AWSD	J	Cassette Holder,TAPE 1	AL
211	GDORF0055AWSB	J	GDORF0055AWSD	J	Cassette Holder,TAPE 2	AL
212	GITAR0356AWSA	J	————————		Back Board,[For U.K.]	—
212	GITAR0357AWSA	J	————————		Back Board,[For Germany]	—
212	GITAR0415AWSA	J	————————		Back Board,[For Russia]	—
212	————————		GITAR0391AWSA	J	Back Board	AH
213	GITAS0050AWSB	J	GITAS0050AWSC	J	Side Panel,Left	AH
214	GITAS0051AWSB	J	GITAS0051AWSC	J	Side Panel,Right	AH
218	HDECQ0366AWSA	J	HDECQ0389AWSA	J	Display Panel	AH
219	JKNBZ0516AWSB	J	JKNBZ0516AWSC	J	Button,Function	AG
220	JKNBZ0517AWSB	J	JKNBZ0517AWSC	J	Button,[X-BASS]	AF
ACCESSORIES / PACKING PARTS						
5	TLABE0230AWZZ	J	TLABE0259AWZZ	J	Label, Bar Code	AB

★ MARK: SPARE PARTS-DELIVERY SECTION

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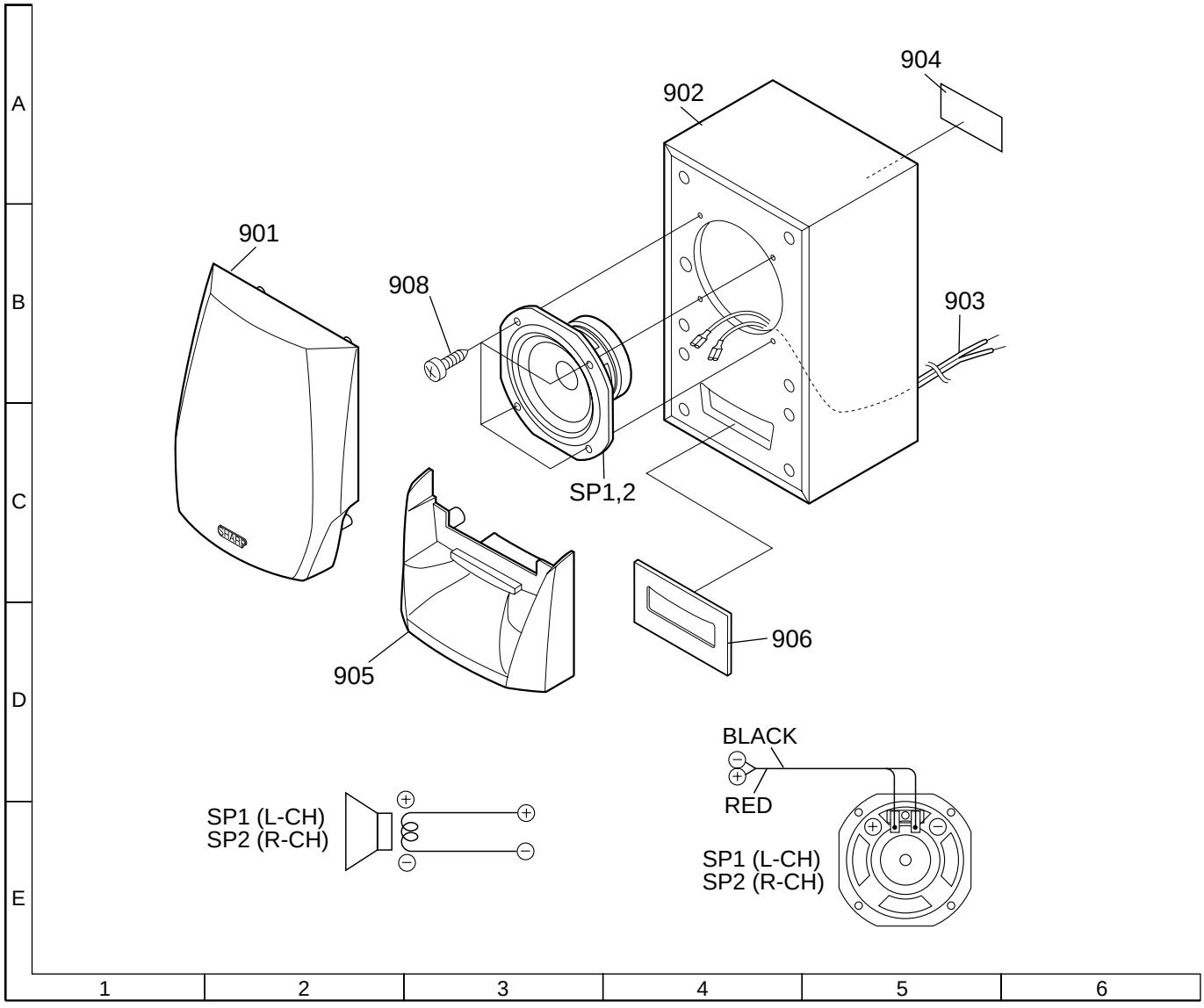
SPEAKER BOX PARTS FRONT SPEAKER

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
901	92L20100413H00	J	AV	Net Frame Ass'y
902	92L10002413H10	J	BE	Speaker Box Ass'y
903	92L3121C413H10	J	AH	Speaker Cord
904	92L6000C413H00	J		Label,Specification
905	92L20300413H00	J	AQ	Panel,Duct
906	109760021039	J	AF	Port Cushion
908	92LN44-412-46	J		Screw,ø4×35mm
SP1,2	VSP0010PBW98A	J	AY	Speaker,Full Range

ACCESSORIES/PACKING PARTS

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
15	SPAKZ0393AWZZ	J	AD	Protection Pad
16	92L411-0064	J	AE	Polyethylene Bag,Front Speaker
17	92LP9819	J	AD	Label,Feature
18	139764081026	J	AN	Packing Add,Top Front Speaker
19	139764081027	J	AN	Packing Add,Bottom Front Speaker



SPEAKER EXPLODED VIEW

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SHARP SERVICE MANUAL

No. S5834CDC421H/

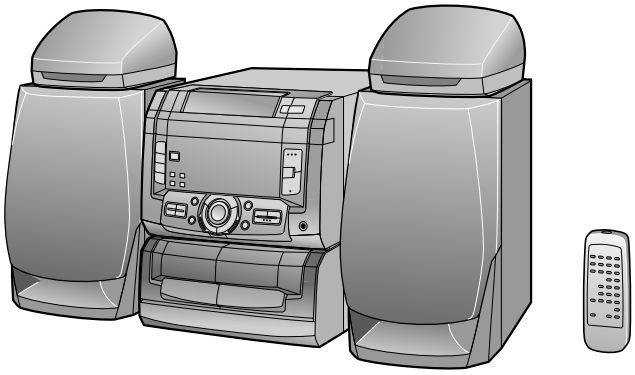

Illustration: CD-C421H

CD-C421H

CP-C421H and SURROUND (GBOXS00018AWZZ)Constitute CD-C421H.

CD-C411H

CP-C411H Constitute CD-C411H.

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.

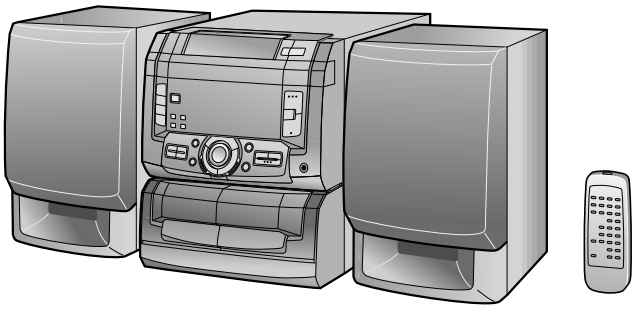

Illustration: CD-C411H

COMPACT disc DIGITAL AUDIO

R·D·S EON

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PACKING OF THE SET (For U.K. Only)

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SAFETY PRECAUTION FOR SERVICE MANUAL

Precaution to be taken when replacing and servicing the Laser Pickup.

The AEL (Accessible Emission Level) of Laser Power Output for this model is specified to be lower than Class I Requirements. However, the following precautions must be observed during servicing to protect your eyes against exposure to the Laser beam

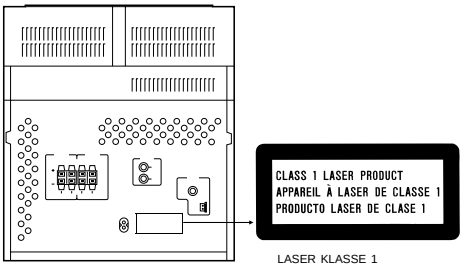
(1) When the cabinet has been removed, the power is turned on without a compact disc, and the Pickup is on a position outer than the lead-in position, the Laser will light for several seconds to detect a disc. Do not look into the Pickup Lens.
(2) The Laser Power Output of the Pickup inside the unit and replacement service parts have already been adjusted prior to shipping.
(3) No adjustment to the Laser Power should be attempted when replacing or servicing the Pickup.
(4) Under no circumstances look directly into the Pickup Lens at any time.
(5) CAUTION - Use of controls or adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Diode Properties
Material: GaAIAs
Wavelength: 780 nm
Emission Duration: continuous
Laser Output: max. 0.6 mW

VAROITUS! LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING - OM APPARATEN ANVÄNDS PÅANNAT SÄTTÄN I DENNA BRUKSANVISNING SPECIFICERAS. KANANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

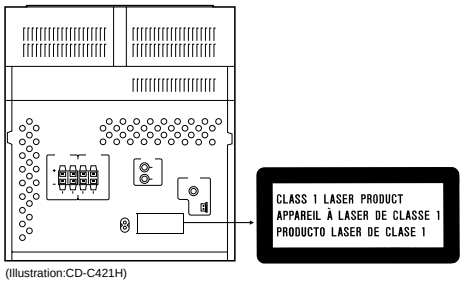
(FOR GERMANY)



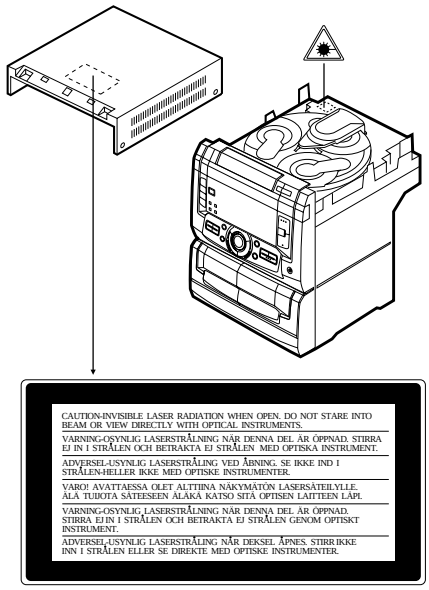
(Illustration:CD-C421H)

LASER KLASSE 1
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT
LASER TŘÍDY 1
LASER TRIEDY 1

(FOR U.K.)



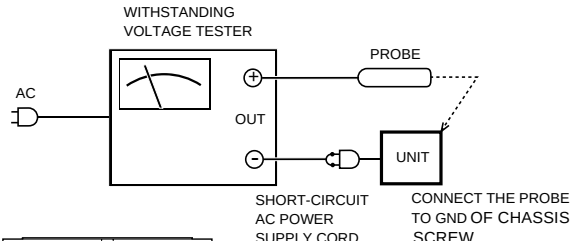
(Illustration:CD-C421H)

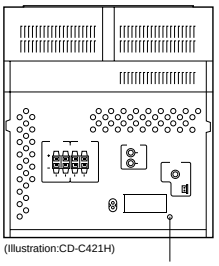

CAUTION-INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.
VARNING-OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRAKTA EJ STRÅLEN MED OPTISKA INSTRUMENT.
ADVERSEL-USYNLIG LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN-HELLER IKKE MED OPTISKE INSTRUMENTER.
VARO! AVATTAESSA OLET ALTTIINA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ TUIJOTA SÄTEESEEN ÄLÄKÄ KATSO SITÄ OPTISEN LAITTEEN LÄPI.
VARNING-OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRAKTA EJ STRÅLEN GENOM OPTISKT INSTRUMENT.
ADVERSEL-USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN ELLER SE DIREKTE MED OPTISKE INSTRUMENTER.

IMPORTANT SERVICE NOTES (U.K. Only)

Before returning the unit to the customer after completion of a repair or adjustment it is necessary for the following withstand voltage test to be applied to ensure the unit is safe for the customer to use.
Setting of Withstanding Voltage Tester and set.

Set name	set value
Withstanding Voltage Tester	
Test voltage	4,240 VPEAK 3,000 VRMS
Set time	6 secs
Set current(Cutoff current)	4 mA
Unit	
Judgment	
OK: The “GOOD” lamp lights. NG: The “NG” lamp lights and the buzzor sounds.	





(Illustration:CD-C421H)

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

SPECIFICATIONS

CD-C421H

● General

Power source: AC 230 V, 50 Hz
Power consumption: 47 W
Dimensions: Width; 270 mm (10-5/8")
Height; 303 mm (11-13/16")
Depth; 341 mm (13-7/16")
Weight: 4.8 kg (10.6 lbs.)

● Amplifier section

Output power:
(For Germany) PMPO; 120 W (total)
MPO; 60 W (30 W + 30 W) (DIN 45 324)
RMS; 40 W (20 W + 20 W) (DIN 45 324)
RMS; 28 W (14 W + 14 W) (DIN 45 500)

Output power:
(For U.K.) MPO; 60 W (30 W + 30 W) (10% T.H.D.)
RMS; 40 W (20 W + 20 W) (10% T.H.D.)
RMS; 28 W (14 W + 14 W) (0.9% T.H.D.)

Output terminals: Front speakers; 5.4 ohms
Surround speakers; 16 ohms
Headphones; 16-50 ohms (recommended; 32 ohms)
Input terminals: Video/Auxiliary (audio signal); 245 mV/47 kohms

● Tuner section

Frequency range: FM; 87.5-108 MHz
AM; 522-1,620 kHz

● Cassette deck section

Frequency response: 50-14,000 Hz (Normal tape)
Signal/noise ratio: 55 dB (TAPE 1, playback)
50 dB (TAPE 2, recording/playback)
Wow and flutter: 0.2 % (DIN 45 511)

● Compact disc player section

Type: 3-disc multi-play compact disc player
Signal readout: Non-contact, 3-beam semi-conductor laser pickup
D/A converter: 1-bit D/A converter
Frequency response: 20 - 20,000 Hz
Dynamic range: 90 dB (1 kHz)

● Front speaker section

Type: 2-way [10 cm (4") woofer and 5 cm (2") tweeter]
Maximum input power: 30 W
Impedance: 5.4 ohms
Dimensions: Width; 180 mm (7-1/8")
Height; 300 mm (11-13/16")
Depth; 204 mm (8-1/16")
Weight: 2.1 kg (4.6 lbs.)/each

● Surround speaker section

Type: 10 cm (4") full-range speaker
Maximum input power: 10 W
Impedance: 16 ohms
Dimensions: Width; 170 mm (6-11/16")
Height; 120 mm (4-3/4")
Depth; 175 mm (6-7/8")
Weight: 0.6 kg (1.3 lbs.)/each

CD-C411H

● General

Power source: AC 230 V, 50 Hz
Power consumption: 32 W
Dimensions: Width; 270 mm (10-5/8")
Height; 303 mm (11-15/16")
Depth; 341 mm (13-7/16")
Weight: 4.8 kg (10.5 lbs.)

● Amplifier section

Output power:
(For Germany) PMPO; 66 W (total)
MPO; 33 W (16.5 W + 16.5 W) (DIN 45 324)
RMS; 20 W (10 W + 10 W) (DIN 45 324)
RMS; 16 W (8 W + 8 W) (DIN 45 500)

Output power:
(For U.K.) MPO; 33 W (16.5 W + 16.5 W) (10% T.H.D.)
RMS; 20 W (10 W + 10 W) (10% T.H.D.)
RMS; 16 W (8 W + 8 W) (0.9% T.H.D.)

Output terminals: Speakers; 8 ohms
Headphones; 16-50 ohms (recommended; 32 ohms)
Input terminals: Video/Auxiliary (audio signal); 245 mV/47 kohms

● Tuner section

Frequency range: FM; 87.5-108 MHz
AM; 522-1,620 kHz

● Cassette deck section

Frequency response: 50-14,000 Hz (Normal tape)
Signal/noise ratio: 55 dB (TAPE 1, playback)
50 dB (TAPE 2, recording/playback)
Wow and flutter:
(For Germany) 0.2 % (DIN 45 511)
(For U.K.) 0.15 % (WRMS)

● Compact disc player section

Type: 3-disc multi-play compact disc player
Signal readout: Non-contact, 3-beam semi-conductor laser pickup
D/A converter: 1-bit D/A converter
Frequency response: 20 - 20,000 Hz
Dynamic range: 90 dB (1 kHz)

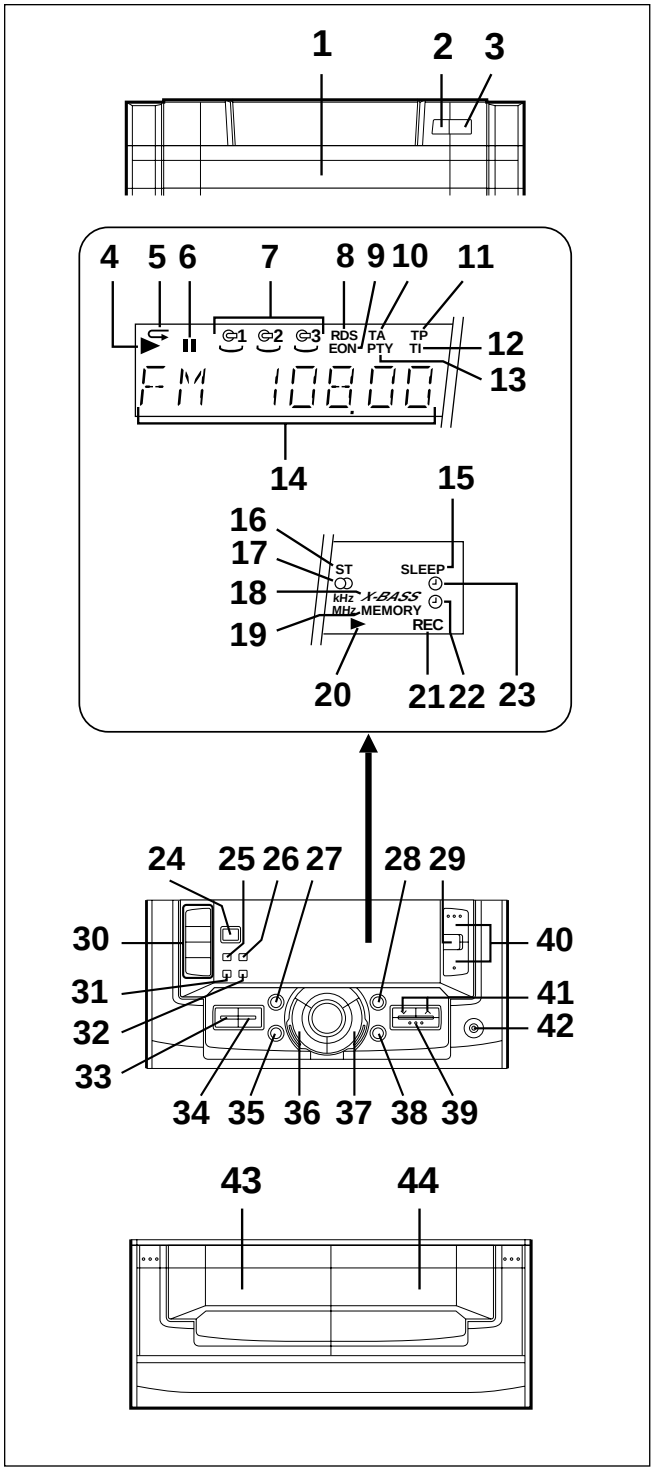
● Speaker section

Type: 100 mm (4") full-range speaker
Maximum input power: 20 W
Impedance: 8 ohms
Dimensions: Width; 180 mm (7-1/8")
Height; 300 mm (11-13/16")
Depth; 204 mm (8-1/16")
Weight: 2.1 kg (4.6 lbs.)/each

Specifications for this model are subject to change without prior notice.

NAMES OF PARTS

CD-C421H/C411H

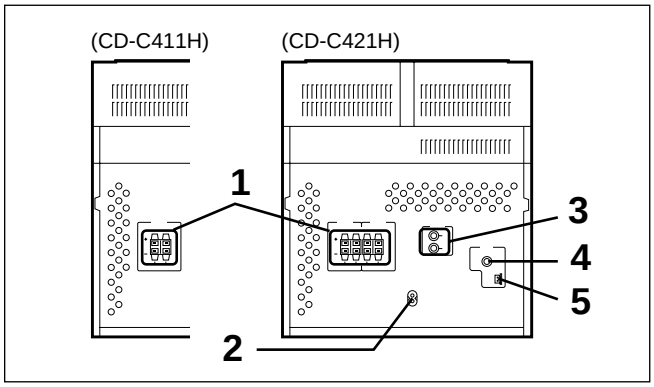


■ **Front Panel**

1. Disc Tray
2. Disc Skip Button
3. Open/Close Button: ▲
4. CD Play Indicator: ▶
5. CD Repeat Indicator:
6. CD Pause Indicator: ❚❚
7. Disc Number Indicators
8. RDS Indicator
9. EON Indicator
10. Traffic Announcement Indicator: TA
11. Traffic Programme Indicator:TP
12. Traffic Information Indicator: TI
13. Programme Type Indicator: PTY
14. Function/CD Track/CD Counter/Frequency/Preset Channel/Volume/Timer/Sleep Time Indicator
15. Sleep Indicator
16. FM Stereo Mode Indicator: ST
17. FM Stereo Indicator:
18. Extra Bass Indicator: X-BASS
19. Memory Indicator
20. Tape Play indicator:
21. Record indicator
22. Timer Record Indicator
23. Timer Play Indicator
24. On/Stand-by Button
25. Programme Type/Traffic Information Search Button
26. EON Button
27. Memory/Set Button
28. Record Pause Button: ●
29. Extra Bass/Equalizer Mode Button
30. Function Selector Buttons
31. ASPM Button
32. Display Mode Selector Button
33. Clock Button
34. Timer/Sleep Button
35. (CD) Track Down/Review Button: ⏮◀◀/◀◀
    (TUNER) Preset Down button: ﹀
36. Stop Button: ■
37. Play/Repeat Button: ▶/
38. (CD) Track Up/Cue Button: ▶▶⏭/▶▶
    (TUNER) Preset Up button: ﹀
39. Random/Demo Button
40. Volume Up/Down Buttons: △/▽
41. Tuning and Time Up/Down Buttons: ﹀/﹀
42. Headphone Socket
43. (TAPE1) Cassette Compartment
44. (TAPE2) Cassette Compartment

■ **Rear Panel**

1. Speaker Terminals
2. AC Power Input Socket
3. Video/Auxiliary (Audio Signal) Input Sockets
4. FM'75 Ohms Aerial Socket
5. AM Loop Aerial Socket



■ Speaker Section

● Front Speaker

CP-C421H

6. Tweeter
7. Woofer
8. Bass Reflex Duct
9. Speaker Wire

CP-C411H

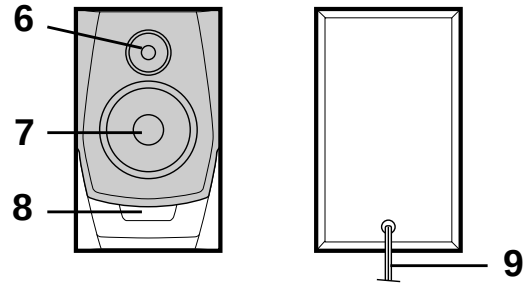
6. Full-Range Speaker
7. Bass Reflex Duct
8. Speaker Wire

● Surround Speaker [CD-C421H Only]

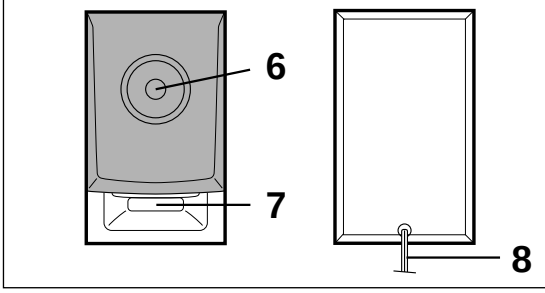
GBOXS00018AWZZ

10. Full-Range Speaker
11. Speaker Wire

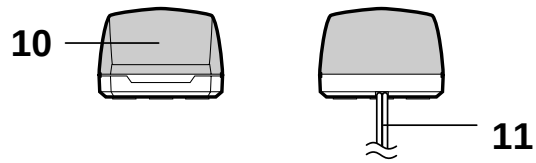
CP-C421H



CP-C411H



Surround Speaker (GBOXS00018AWZZ)
[CD-C421H Only]



CD-C421H/C411H

■ Remote Control

1. Remote Control Transmitter LED

● CD control section

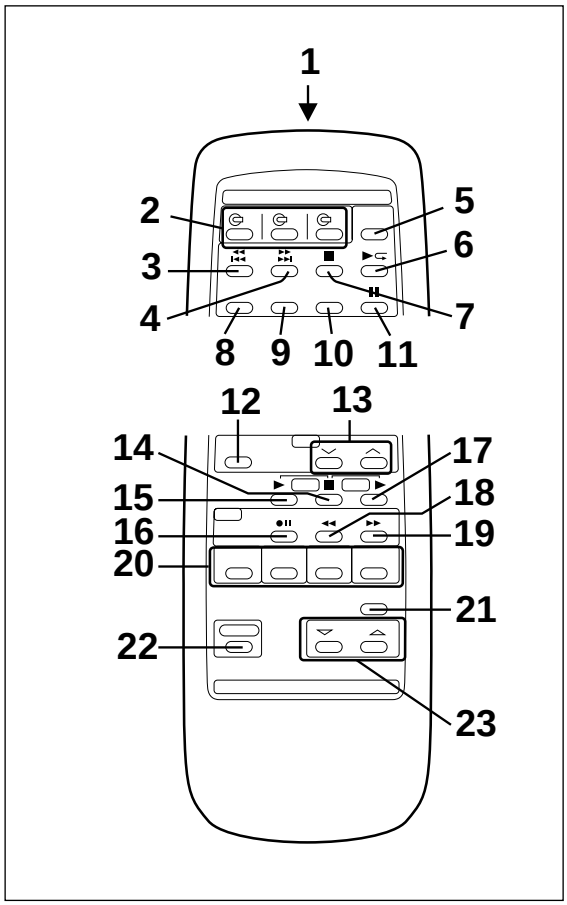
2. Disc Number Select Buttons
3. Track Down/Review Button: ◀◀/I◀◀
4. Track Up/Cue Button: ▶▶/▶▶I
5. Disc Skip Button
6. Play/Repeat Button: ▶/⇄
7. Stop Button: ■
8. Memory Button
9. Clear Button
10. Random Button
11. Pause Button: ❚❚

● Tuner control section

12. Programme Type/Traffic Information Search Button
13. Preset Up/Down Buttons: ∨/∧

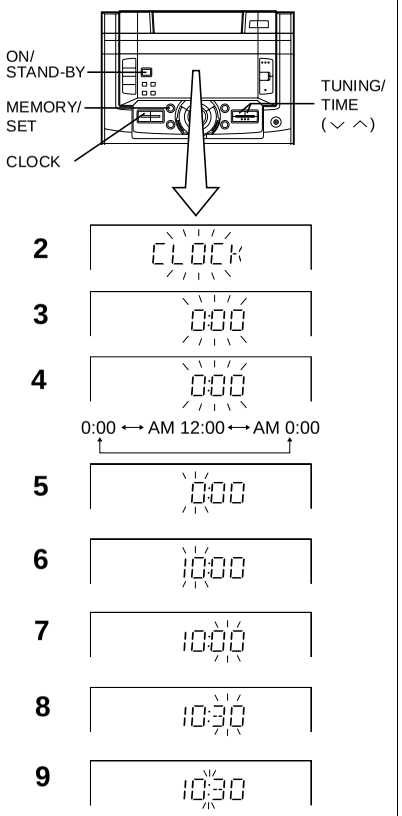
● Tape control section

14. (TAPE 1/2) Stop Button: ■
15. (TAPE 1) Play Button: ▶
16. (TAPE 2) Record Pause Button: ●❚❚
17. (TAPE 2) Play Button: ▶
18. (TAPE 2) Rewind Button: ◀◀
19. (TAPE 2) Fast Forward Button: ▶▶
20. Function Selector Buttons
21. Extra Bass/Equalizer Mode Button
22. Onn/Stand-by Button
23. Volume Up/Down Buttons: ▽/△



SETTING THE CLOCK

In this example, the clock is set for the 24-hour (0:00) system.



(Main unit operation)

1 Press the ON/STAND-BY button to enter the stand-by mode.

2 Press the CLOCK button.

3 Within 5 seconds, press the MEMORY/SET button.

4 Press the TUNING/TIME (∨ or ∧) button to select the time display mode.

"0:00" → The 24-hour display will appear. (0:00 - 23:59)
"AM 12:00" → The 12-hour display will appear. (AM 12:00 - PM 11:59)
"AM 0:00" → The 12-hour display will appear. (AM 0:00 - PM 11:59)

● Note that this can only be set when the unit is first installed or it has been reset (see page 23).

5 Press the MEMORY/SET button.

6 Press the TUNING/TIME (∨ or ∧) button to adjust the hour.

● Press the TUNING/TIME (∨ or ∧) button once to advance the time by 1 hour. Hold it down to advance continuously.

● When the 12-hour display is selected, "AM" will change automatically to "PM".

7 Press the MEMORY/SET button.

8 Press the TUNING/TIME (∨ or ∧) button to adjust the minutes.

● Press the TUNING/TIME (∨ or ∧) button once to advance the time by 1 minute. Hold it down to change the time in 5 minute intervals.

● The hour setting will not advance even if minutes advance from "59" to "00".

9 Press the MEMORY/SET button.

● The clock starts operating from "0" seconds. (Seconds are not displayed.)

Note:

● In the event of a power failure or when the AC power lead is disconnected, the clock display will go out.
When the AC power supply is restored, the clock display will flash on and off to indicate the time when the power failure occurred or when the AC power lead was disconnected.
If this happens, follow the procedure below to change the clock time.

To change the clock time:

When the unit is in the stand-by mode:
① Press the MEMORY/SET button.
② Perform steps 6 - 9 above.
When the unit is on:
① Press the CLOCK button.
② Within 5 seconds, press the MEMORY/SET button.
③ Perform steps 6 - 9 above.

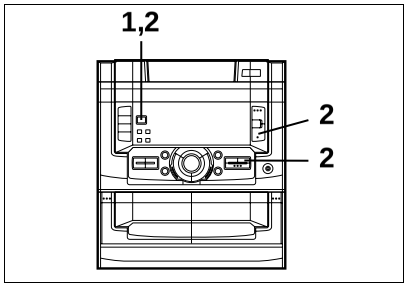
To see the time display:

Press the CLOCK button.
● The time display will appear for about 5 seconds.

To change the time display mode:

① Perform steps 1 - 2 in the section "RESETTING THE MICROCOMPUTER", on page 23.
② Perform steps 1 - 9 above.

RESETTING THE MICROCOMPUTER



Reset the microcomputer under the following conditions:

● To erase all of the stored memory contents (clock and timer settings, and tuner and CD presets).
● If the display is not correct.
● If the operation is not correct.

1 Press the ON/STAND-BY button to enter the stand-by mode.

2 While pressing down the VOLUME ∨ button and the oniy TUNING/TIME ∧ button, hold down the ON/STAND-BY button for at least 1 second.

Caution:

● The operation explained above will erase all data stored in memory including clock and timer settings, and tuner and CD presets.

DISASSEMBLY

Caution on Disassembly

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:

1. Take cassette tape and compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take suffcient care on static electricity of integrated circuits and other circuits when servicing.

CD-C421H/C411H

STEP	REMOVAL	PROCEDURE	FIGURE
1	Top Cabinet	1. Screw ..... (A1) x4	7-1
2	Side Panel (Left/right)	1. Screw ..... (B1) x2 2. Screw ..... (B2) x4	7-1
3	CD Player Unit/ CD Tray Cover	1. Turn on the power supply, open the disc tray, take out the CD cover, and close. (Note 1) 2. Hook ..... (C1) x3 3. Hook ..... (C2) x2 4. Socket ..... (C3) x4	7-2
4	Back Board	1. Screw ..... (D1) x6	7-2
5	Tuner PWB	1. Screw ..... (E1) x3 2. Socket ..... (E2) x1	8-1
6	Switch PWB/ Display PWB/ Main PWB/	1. Screw ..... (F1) x6 2. Screw ..... (F2) x2 3. Socket ..... (F3) x4	8-1.2
7	Front Panel	1. Screw ..... (G1) x3 2. Hook ..... (G2) x2	8-2
8	Tape Mechanism	1. Open the cassette holder. 2. Screw ..... (H1) x6	8-2
9	Turntable	1. Screw ..... (J1) x1 2. Cover ..... (J2) x1	8-3
10	Disc Tray	1. Screw ..... (K1) x2 2. Guide ..... (K2) x2	8-3
11	CD Changer Mechanism	1. Screw ..... (L1) x4	8-4
12	CD Mechanism	1. Screw ..... (M1) x1	8-4

Note 1:

How to open the changer manually. (Fig.7-3)

1. Insert the tip of fine screwdriver into the hole of CD player base, and press down the worm wheel **< A >** .
2. Then, turn fully the lock lever in the arrow direction through the hole on the loading chassis bottom in this state. After that, push forward the CD player base.

CD-C421H/C411H

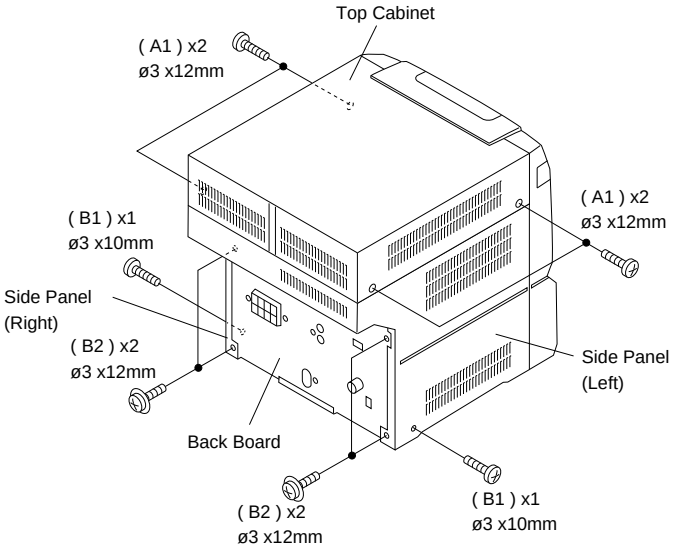


Figure 7-1

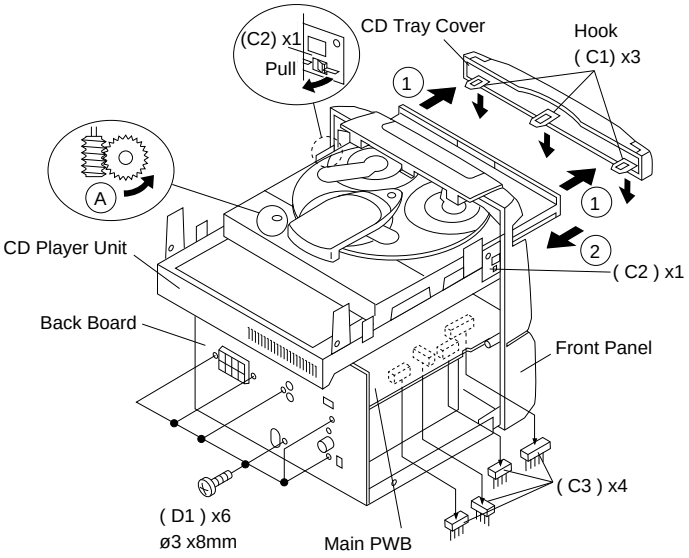


Figure 7-2

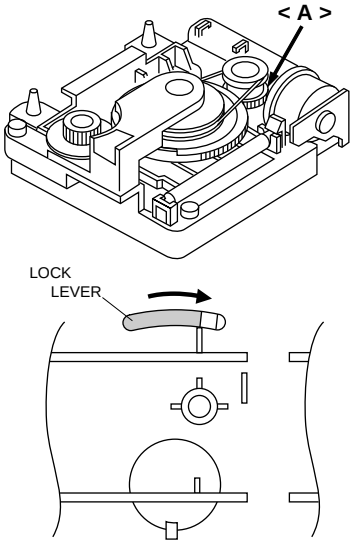


Figure 7-3

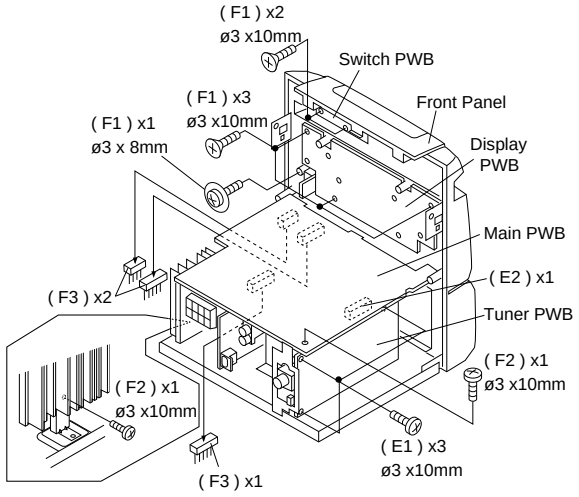


Figure 8-1

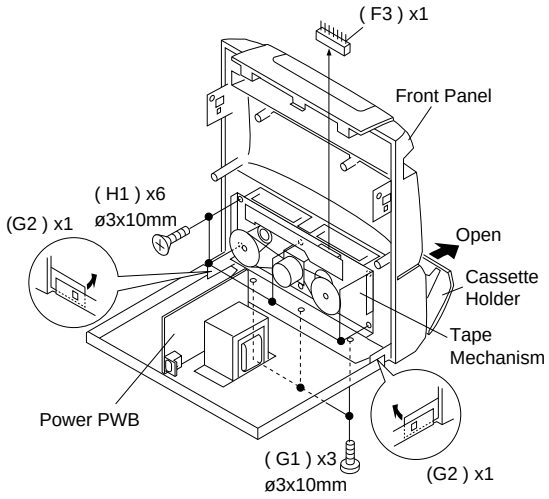


Figure 8-2

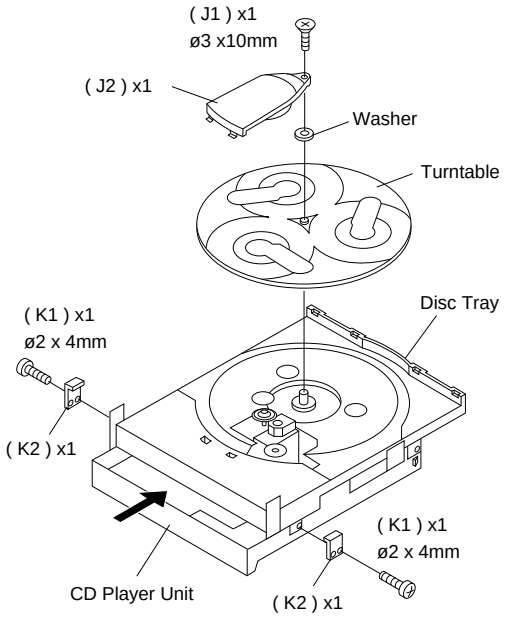
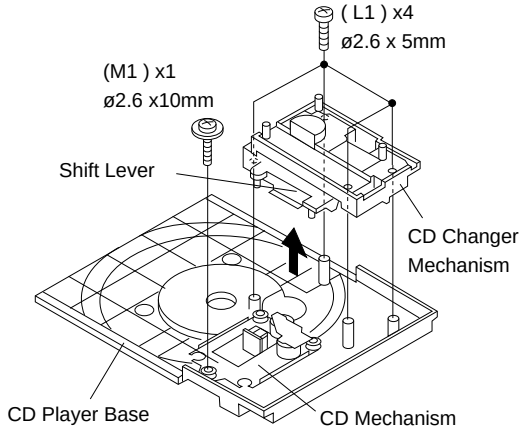


Figure 8-3



Be careful when installing the CD changer mechanism. Install the CD changer mechanism on the CD player base after the shift lever has been set in the highest position.

Figure 8-4

CP-C421H

STEP	REMOVAL	PROCEDURE	FIGURE
1	Front Speaker	1. Net Frame ..... (A1) x1 3. Duct Panel ..... (A2) x1 3. Screw ..... (A3) x4 4. Screw ..... (A4) x4	9-1

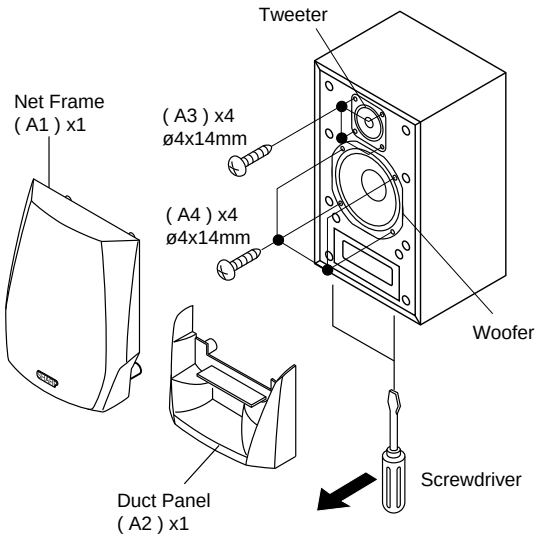


Figure 9-1

CP-C411H

STEP	REMOVAL	PROCEDURE	FIGURE
1	Front Speaker	1. Net Frame ..... (A1) x1 3. Duct Panel ..... (A2) x1 3. Screw ..... (A3) x4	9-2

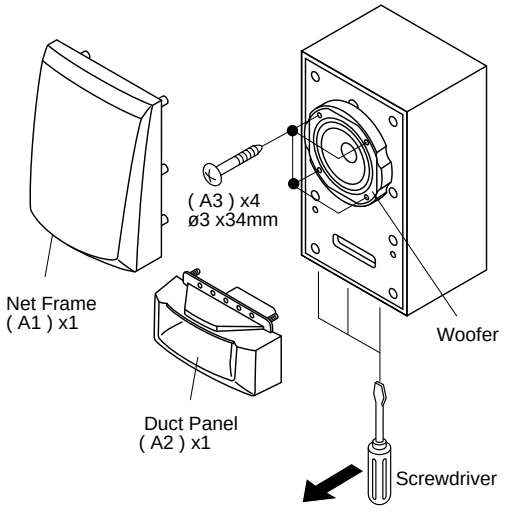


Figure 9-2

Notes:
The Surround speakers (CD-C421H only) can be easily disassembled.Therefore the disassembling method is not discribed.For details refer to the disassembling drawing in the Parts Guide.

REMOVING AND REINSTALLING THE MAIN PARTS

CD MECHANISM SECTION

Perform steps 1, 2, 3, 13 and 14 of the disassembly method to remove the CD mechanism.

How to remove the loading motor (See Fig. 9-3)

1. Remove the screws (A1) x 2 pcs., to remove the loading motor.

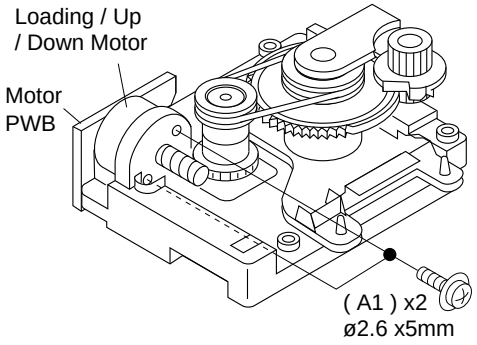


Figure 9-3

How to remove the pickup (See Fig. 9-4)

1. Remove the screws (B1) x 2 pcs., to remove the shaft (B2) x 1 pcs.
2. Remove the stop washer (B3) x 1 pc., to remove the gear (B4) x 1 pc.
3. Remove the pickup.

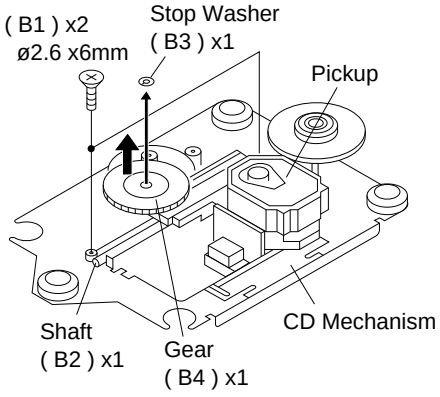


Figure 9-4

ADJUSTMENT

MECHANISM SECTION

• Driving Force Check

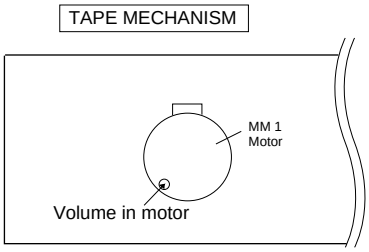
Torque Meter	Specified Value
Play: TW-2412	Tape 1: Over 80 g Tape 2: Over 80 g

• Torque Check

Torque Meter	Specified Value	
	Tape 1	Tape 2
Play: TW-2111	30 to 60 g. cm	30 to 60 g.cm
Fast forward: TW-2231	—	60 to 120 g.cm
Rewind: TW-2231	—	60 to 120 g.cm

• Tape Speed

	Test Tape	Adjusting Point	Specified Value	Instrument Connection
Normal speed	MTT-111	Volume in motor. (MM1)	3,000 ± 30 Hz	Speaker terminal (Load resistance: 8 ohms)



TUNER SECTION

fL: Low-range frequency
fH: High-renge frequency

• AM IF/RF

Signal generator: 400 Hz, 30%, AM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
IF	450 kHz	1,620 kHz	T351	*1
AM Band Coverage	—	522 kHz	(fL): T306 1.1 ± 0.1 V	*2
AM Tracking	990 kHz	990 kHz	(fL): T302	*1

*1. Input: Antenna, Output: TP302
*2. Input: Antenna, Output: TP301

• FM

Notes:

1: Description of the "FM IF Adjustment" is not carried on this Manual. It is because the IF coil in the FM front end section has been best adjusted in the factory so that its further adjustment is not needed at the field. When replacing the FM front end assembly, no adjustment is needed either.
2: The parts in the FM front end section are prepared in a complete unit, so you can't obtain each part individually

• FM Mute Level

Signal generator: 1 kHz, 40 kHz dev., FM modulated

Frequency	Frequency Display	Adjusting Parts	Instrument Connection
98.00 MHz (25 dBµV)	98.00 MHz	VR351*	Input: Antenna Output: Speaker Terminal

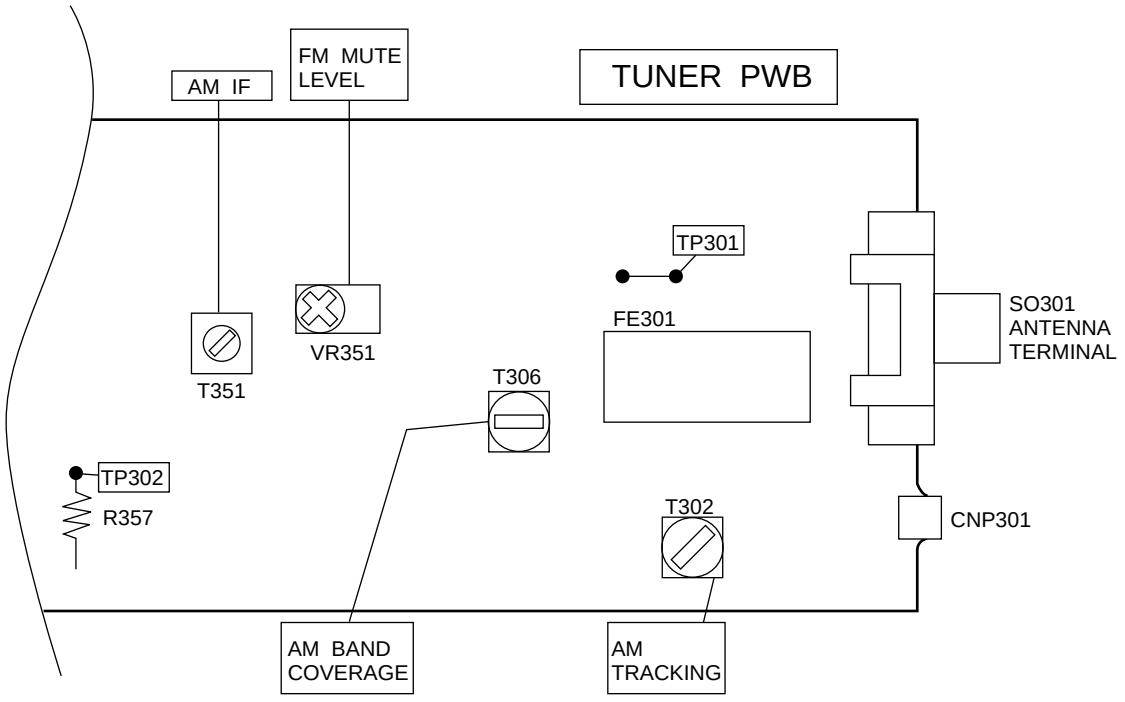


Figure 10 ADJUSTMENT POINTS

TEST MODE

• Setting the test mode

Any one of test mode can be set by pressing several keys as follows.
<REC. PAUSE> + <CD> + <POWER> TEST: CD operation test

• TEST mode

Function — CD test mode

Setting of TEST mode
Indication of CD TST mode (Fig. 11-1)
OPEN/CLOSE operation is manual operation.
The pickup can be moved by using the (▶▶) or (◀◀) key.
IL is not performed.

<MEMORY> LASER ON — <MEMORY> Tracking on the spot. SERVO OFF PLAY — <MEMORY> Tracking on the spot. SERVO ON PLAY — <STOP> STOP

<PLAY> key input — TOC. IL is performed, and the ordinary PLAY is performed. If the following key is pressed during PLAY, it is possible to specify directly any Track No.
<Disc Number 1> key: Track 4
<Disc Number 2> key: Track 9
<Disc Number 3> key: Track 15
— Press <STOP> key. — Stop

Note:

Only in STOP state it is possible to slide the pickup with the (▶▶) or (◀◀) key.

VOL. --- Last memory
BAL. --- CENTER
R.GEQ. --- FLAT
X-BAS --- OFF

Canceling method - POWER OFF

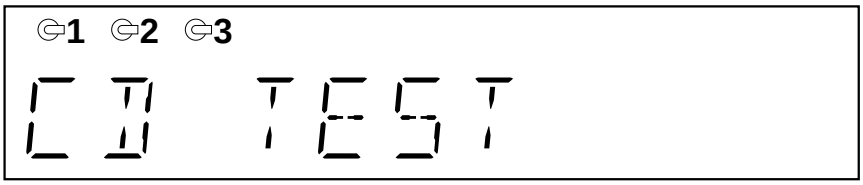


Figure 11-1

CD SECTION

Since this CD system incorporates the following automatic adjustment function, when the pickup is replaced, it is not necessary to readjust it.
Since this CD unit does not need adjustment, the combination of PWB and laser pickup unit is not restricted.

• Automatic adjustment item

1. Focus offset (Fig. 11-2)
2. Tracking offset (Fig. 11-3)
3. E/F balance (tracking error balance) (Fig. 11-4)
4. RF level AGC function (HF level: constant)
5. RF level automatic follow-up of the tracking gain

This automatic adjustment is performed each time a disc is changed. Therefore, each disc is played back using the optimal settings.

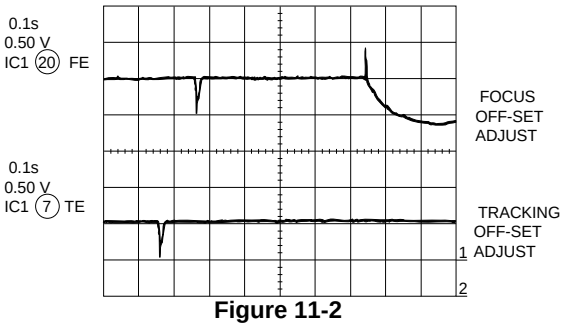


Figure 11-2

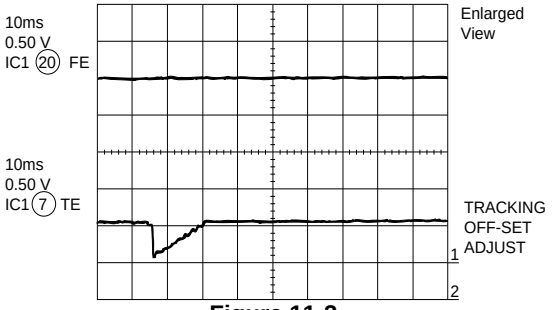


Figure 11-3

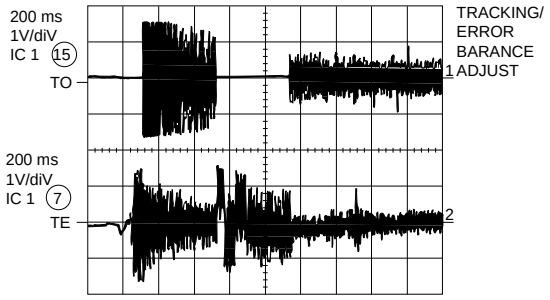


Figure 11-4

RDS (Radio Data System) OPERATION

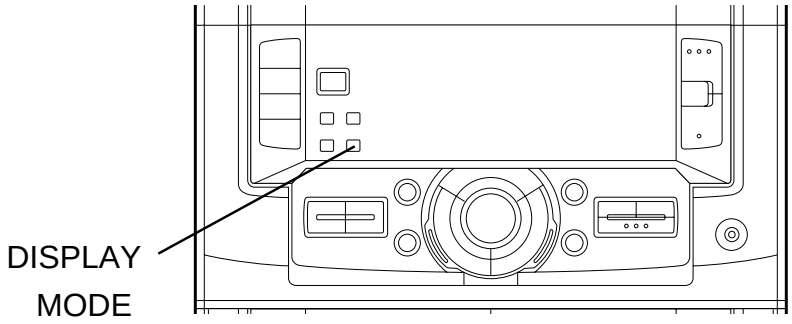


Figure 12-1

■ Receiving FM Stations with RDS (Radio Data System)

RDS is a broadcasting service which a growing number of FM stations are now providing. It allows these FM stations to send additional signals along with their regular programme signals. For example, the stations send their station names, and information about what type of programme they broadcast, such as sports or music, etc.
When tuned to an FM station which provide the RDS service, the RDS will appear, the station frequency (and then the station name if sent) is displayed.
The TP (Traffic Programme) will appear on the display when the received broadcast carries traffic annoucements, and the TA (Traffic Annoucement) will appear whilst a traffic announcement is being received. EON will appear whilst the EON (Enhanced Other Networks information) data is being broadcast.

Note:
When the TP and TA appear at the same time, an announcement is being made.
When only the TA appears, an announcement is not being made. (See page 15.)

■ Information Provided by RDS

With the CD-C421/C411H, you can display two types of RDS service. To show them in the display, press the DISPLAY MODE button.
Each time you press the DISPLAY MODE button, the display will change to show the following information.

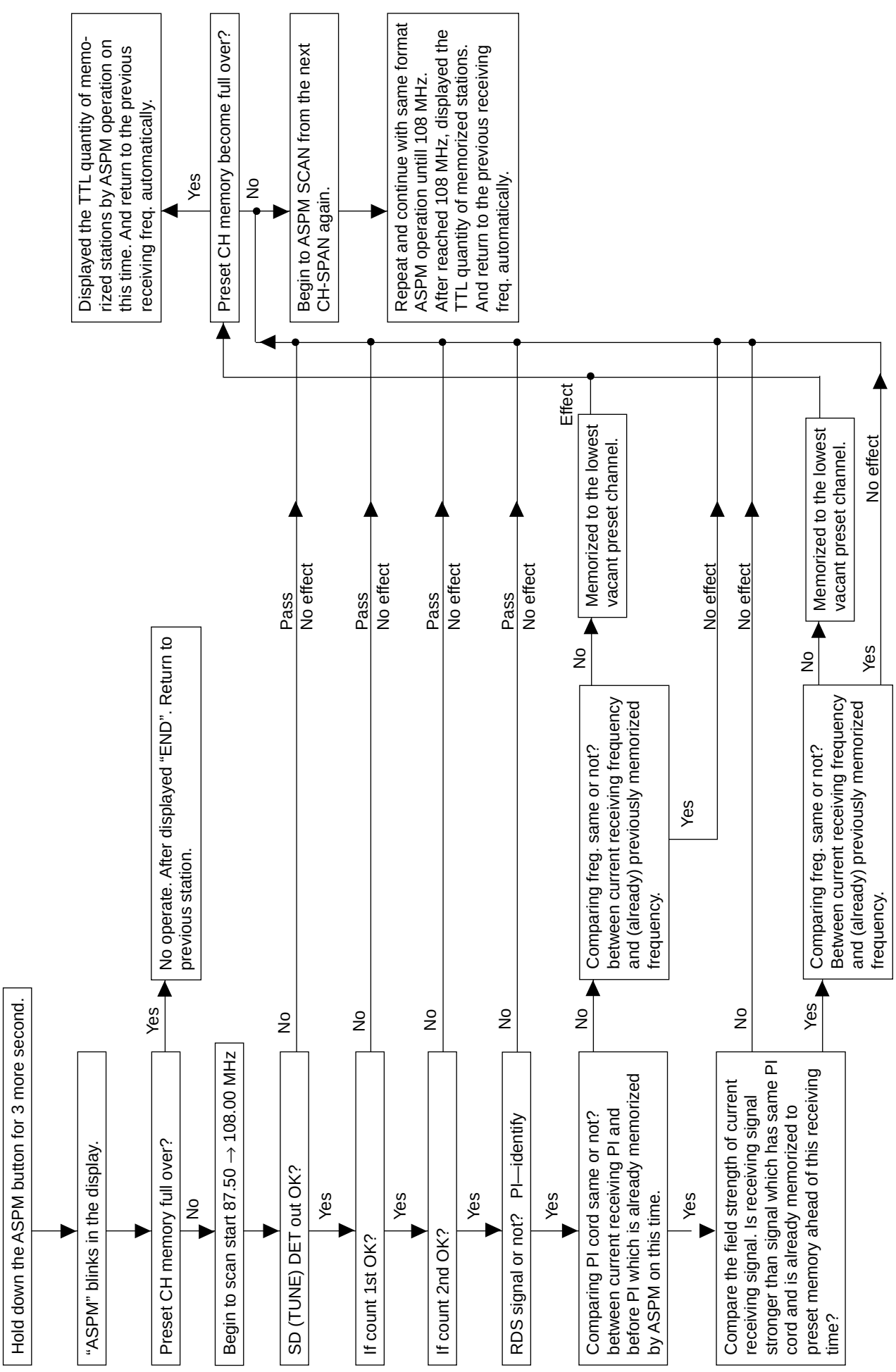
PS (Programme Service):	Station names commonly known will be diaplayed. "NO PS" appears if no signal is being sent.
PTY (Progamme Type):	Programme type will be diplayed. "NO PTY" appears if no signal is being sent.
Station Frequency:	Station frequencies.

Descriptions of the PTY (Programme Type) codes, TP (Traffic Programme) and TA (Traffic Announcement)
Eith the CD-C421H/C411H, you can search for and receive the forrowing PTY, TP and TA signals.

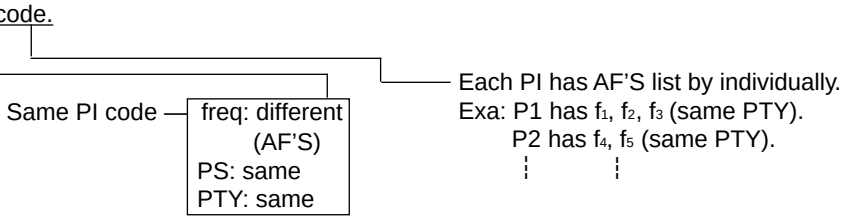
NEWS:	News
AFFAIRS:	Topical programme expanding on the current news or affairs
INFO:	Programmes on medical service, weather forecast, etc.
EDUCATE:	Educational programmes
DRAMA:	Radio plays
CULTURE:	Programmes on national or regional culture.
SCIENCE:	Programmes on national sciences and technology.
VARIED:	Other programmes like comedies or ceremonies
POP M:	Pop music
ROCK M:	Rock music
M.O.R. M:	Middle-of-the-road music (usually called "easy listening")
LIGHT M:	Light music
CLASSICS:	Classics
OTHER M:	Other music
ALARM:	Emergency broadcasts
NONE:	no Programme type (receive only)
TP:	Broadcasts which carry traffic announcements
TA:	Traffic announcements are being broadcast at present.

Note:
● When the unit is in the EON stand-by mode and a programme is selected, the unit will display "TI" instead of "TP" or "TA".

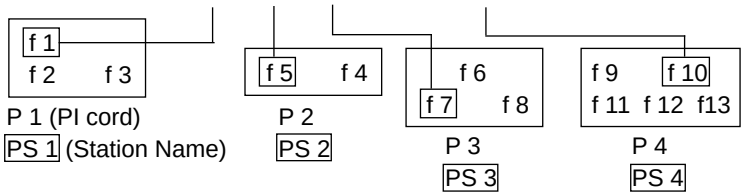
ASPM, summary operation


Hold down the ASPM button for 3 more second.
"ASPM" blinks in the display.
Preset CH memory full over?
Yes
No operate. After displayed "END". Return to previous station.
No
Begin to scan start 87.50 → 108.00 MHz
SD (TUNE) DET out OK?
No
Pass
No effect
Yes
If count 1st OK?
No
Pass
No effect
Yes
If count 2nd OK?
No
Pass
No effect
Yes
RDS signal or not? PI—identify
No
Pass
No effect
Yes
Comparing PI cord same or not? between current receiving PI and before PI which is already memorized by ASPM on this time.
No
Comparing freq. same or not? between current receiving frequency and (already) previously memorized frequency.
No
Memorized to the lowest vacant preset channel.
Effect
Yes
Compare the field strength of current receiving signal. Is receiving signal stronger than signal which has same PI cord and is already memorized to preset memory ahead of this receiving time?
No
No effect
Yes
Comparing freq. same or not? Between current receiving frequency and (already) previously memorized frequency.
No
Memorized to the lowest vacant preset channel.
Yes
No effect
Preset CH memory become full over?
Yes
Displayed the TTL quantity of memorized stations by ASPM operation on this time. And return to the previous receiving freq. automatically.
No
Begin to ASPM SCAN from the next CH-SPAN again.
Repeat and continue with same format ASPM operation untill 108 MHz. After reached 108 MHz, displayed the TTL quantity of memorized stations. And return to the previous receiving freq. automatically.

• ASPM SCAN: 87.50MHz → 108.00 MHz.
• Only RDS signal is memorized by ASPM because RDS signal has PI code and is suitable and convenient for ASPM operation.
ASPM
Comparing field strength, only one strongest RDS station is memorized of all stations (repeater relay stations) that have same PI code.



[For example] Pickup and memorized to preset CH.



Select signals (f1, f5, f7, f10) are memorized in the preset memory by ASPM.
• If tentative - ASPM operation is repeated intententionally, never memorized (over write) at the same frequecy. 1st time ASPM → strongest stations of each pi are memorized.

ASPM is not only very usefull for PTY search, but also EON operation.
2nd time ASPM → 2nd strong stations of each pi are memorized and so on.
PTY search function is equal to FM band search function as a result.

1. Introduction of RDS for CD-C421H/C411H

CD-C421H/C411H RDS function is equal to adding EON feature to the current CD-C75H RDS.
EON feature is EON—PTY and EON—TI.
Although PTY and TI indicators are separated, PTY contains TI in the PTY items (software) like current PTY search items.

EON—PTY and EON—TI are basically stand-by → receive the desired program of ON station.

2.The difference point from current CD-C75H RDS. (CD-C75H — CD-C421H/C411H)

1. PTY item: added TA.TTL 18 kind.
2. Each "TP", "TA" ind. light up or go out individually.
"TA" ind. doesn't light up on current model, CD-C75H due to none EON—TI.
3. Added 3 indicators(in FL) due to adding EON feature.
EON: Lights up only during receiving EON data (14A).
TI: During EON-TI stand-by → Light up
During receiving ON station. → blink.
PTY: During EON-PTY stanb-by → Light up
During receiving ON station. → blink.

4. No adjust type (None adjusting circuit.)
5. Added EON button.
6. Need to change RDS logo due to add EON feature.
7. Added EON—TI, EON—PTY function.

3. Summary of CD-C421H/C411H RDS—EON operation

EON—PTY: Select and set the desired "PTY" → stand-by → switch to ON(other network) Station at the start of desired PTY automatically → stay and listen to PTY of ON station → switch back to TN(This net) station automatically at the end of PTY(ON) i.e. after changing to another PTY(except AFFAIRS) or cancelling to receive PTY of ON station midway.

EON—TI: Select and set the "TI" → stand-by → switch to ON station at the start of traffic announcement automati cally → stay and listen to TA of ON station → switch back to TN station autmatically at the end of TA(ON). ie after TA(ON) is over or cancelled to receive TA of ON station midway.

When switching TN → ON station.
In case of exist 2 more stations having the desired(specified) "PTY" or "TI", the receiver will select and switch toON station comparing field strength at the same time. But when the frequency of ON station exists in the preset-memory, then reciver switches straight to that ON station(CH), without comparing field strength so can make a quick switching from TN—ON sta tion. Preset memory takes priority of switching TN—ON station.
therefore ASPM is usefull not only for PTY search but also for rapid EON switching. Anyway CD-C421/C411H EON is basi cally stand-by and receiving method, along with the Guidelines for EON implementation.

EON summary notice for reference

1. EON-TI/PTY EON stand-by can be set, only when EON ind. lights up.
While EON ind. goes out (NO EON STATION), EON stand-by can't be set.
If the EON button is pressed, then “NO EON” is indication the display.
2. EON-TI/PTY Even if switch back ON→TN station continue to keep EON stand-by.
3. EON-TI Don’t switch TN→ON during TN broadcast TA. (same item)
4. EON-TI/PTY EON can be cancelled during receiving ON station by pressing EON button if necessary and switch back ON→TN.
5. EON-TI/PTY EON stand-by is perfectly cancelled (cleared) by pressing EON button 2 times during stand-by or powerOFF or Tun Up/ Down or change band or recall pre-set CH.
6. EON-TI/PTY After setting EON stand-by, stand-by items can be confirmed by pressing EON button one time.
7. EON-TI/PTY EON button function: •EON setting
•Confirm stand-by items
•Cancel (ON→TN)
•EON clear cancel (2 times)
8. EON-TI/PTY After setting EON-TI and EON-PTY stand-by, if when EON data is not transmitted, EON ind goes out and EON stand-by is automatically cancelled display “NO EON”.
9. EON-TI EON-TI stand-by can't be set. When TP=0,TA=0(TN) even if EON ind. lights up and the EON button is pressed then “NO TI” is indication the display.
10. EON-PTY Don’t switch TN→ON during TN broadcast same specified PTY. (same item of PTY)
11. EON-TI/PTY Switch TN→ON→ TN station one cycle.
Never switch TN→ON1→ON2→ Other net to other net station.
12. EON-TI/PTY After switch TN→ON station. When ON station is NO RDS, NO signal, TA=OFF or different PTY items. The receiver switch back ON→TN displaying “NO READY”.
13. During receive ON station. when ON station become to be NO RDS, NO signal, TA=ON to OFF or different PTY item, The receiver switch back ON→TN.
14. EON-TI/PTY Switch TN→ON in case of 2 more stations exist, comparing field strength and switch to the strongest station, if these signals are same strength, switch to the first previous station.
If same frequency as AF'Sexists in the preset memory, then switch TN→ON (preset memory station) straight.
In case of exist 2 more preset memories of AF’S,then switch to the preset CH which taken in EON DATA first, also in this case no concern to field strength.
15. Even if switch TN→ON preset memory straight, that ON station is very weak signal, then search another AF'S (ON) station comparing field strength and switch to the strongest station as a result. Of all atations of AF'S are very weak or no good condition, then, switch back ON→TN automatically display "NO READY".
16. EON-TI/PTY No linkage volume, power ON/OFF, and switch function.

Traffic Programme code (TP)	Traffic Announcement code (TA)	Applications
OFF	OFF	This programme does notcarry traffic announcements nor does it refer, via EON, to a programme that does.
OFF	ON	This programmecarries EON information about another programme which gives traffic information.
ON	OFF	This programme carries traffic announcements but none are being broadcast at present and may also carry EON information about other traffic announcements.
ON	ON	A traffic announcement is being broadcast on this programme at present.

NOTES ON SCHEMATIC DIAGRAM

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with “Fusible” is a fuse type.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression “capacitance/withstand voltage” is used.
  (CH), (TH), (RH), (UJ): Temperature compensation
  (ML): Mylar type
  (P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
  1. In the tuner section,
     ( ) indicates AM
  2. In the main section, a tape is being played back.
  3. In the deck section, a tape is being played back.
     ( ) indicates the record state.
  4. In the power section, a tape is being played back.
  5. In the CD section, the CD is stopped.
- Parts marked with “ ⚠ ” (⊏ ═ ═ ═ ⊐) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
SW1	OPEN/CLOSE	ON—OFF
SW2	MECHA UP	ON—OFF
SW3	DISC NUMBER	ON—OFF
SW4	PICKUP IN	ON—OFF
SW701	ON/STAND-BY	ON—OFF
SW702	CLOCK	ON—OFF
SW703	TIMER/SLEEP	ON—OFF
SW704	CD	ON—OFF
SW705	TUNER/BAND	ON—OFF
SW706	TAPE	ON—OFF
SW707	VIDEO/AUX	ON—OFF
SW708	EON	ON—OFF
SW709	PTY, /TI SEARCH	ON—OFF
SW710	ASPM	ON—OFF
SW711	DISPLAY MODE	ON—OFF
SW712	REC PAUSE	ON—OFF

REF. NO	DESCRIPTION	POSITION
SW713	TUNING UP/TIME	ON—OFF
SW714	RANDAM DEMO	ON—OFF
SW715	VOLUME UP	ON—OFF
SW716	STOP	ON—OFF
SW717	FWD	ON—OFF
SW718	FF/PRESET UP	ON—OFF
SW719	MEMORY SET	ON—OFF
SW720	TUNING DOWN/TIME	ON—OFF
SW721	VOLUME DOWN	ON—OFF
SW722	X-BASS EQUALIZER	ON—OFF
SW724	REV/PRESET DOWN	ON—OFF
SW725	OPEN/CLOSE	ON—OFF
SW726	DISC SKIP	ON—OFF
SWM 3	FOOL PROOF	ON—OFF
SWM 4	F.A.S	ON—OFF
SWM 5	CAM	ON—OFF

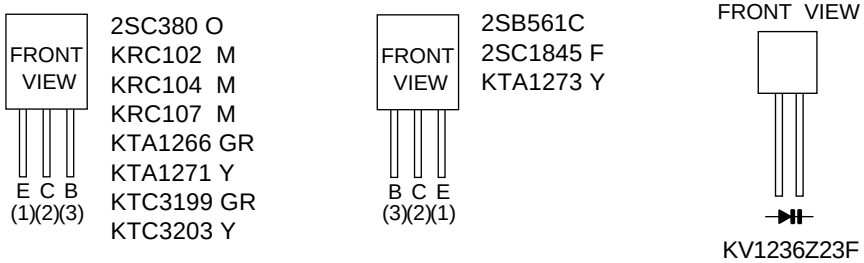


Figure 16 TYPES OF TRANSISTOR AND LED

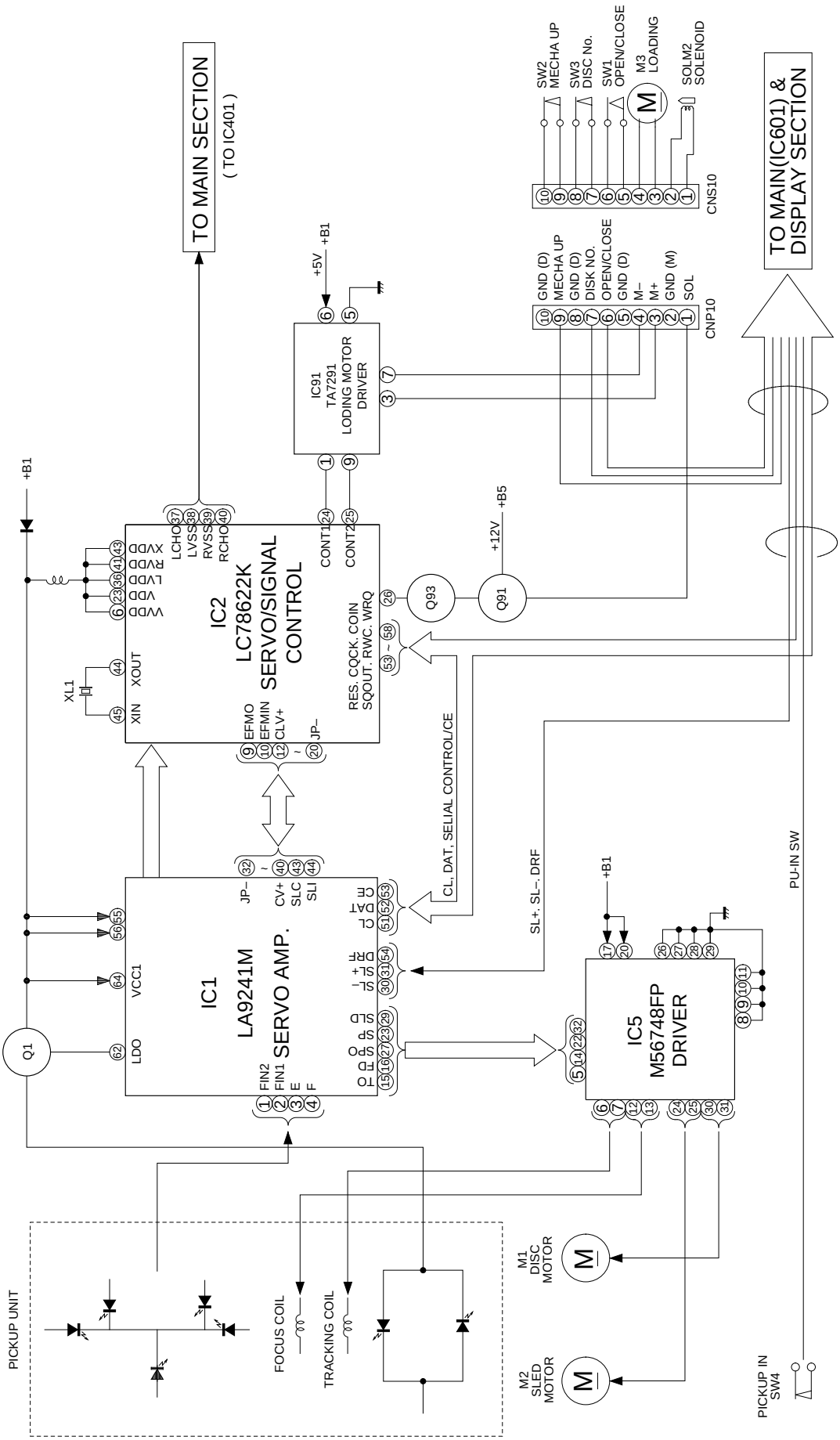


Figure 17 BLOCK DIAGRAM (1/3)

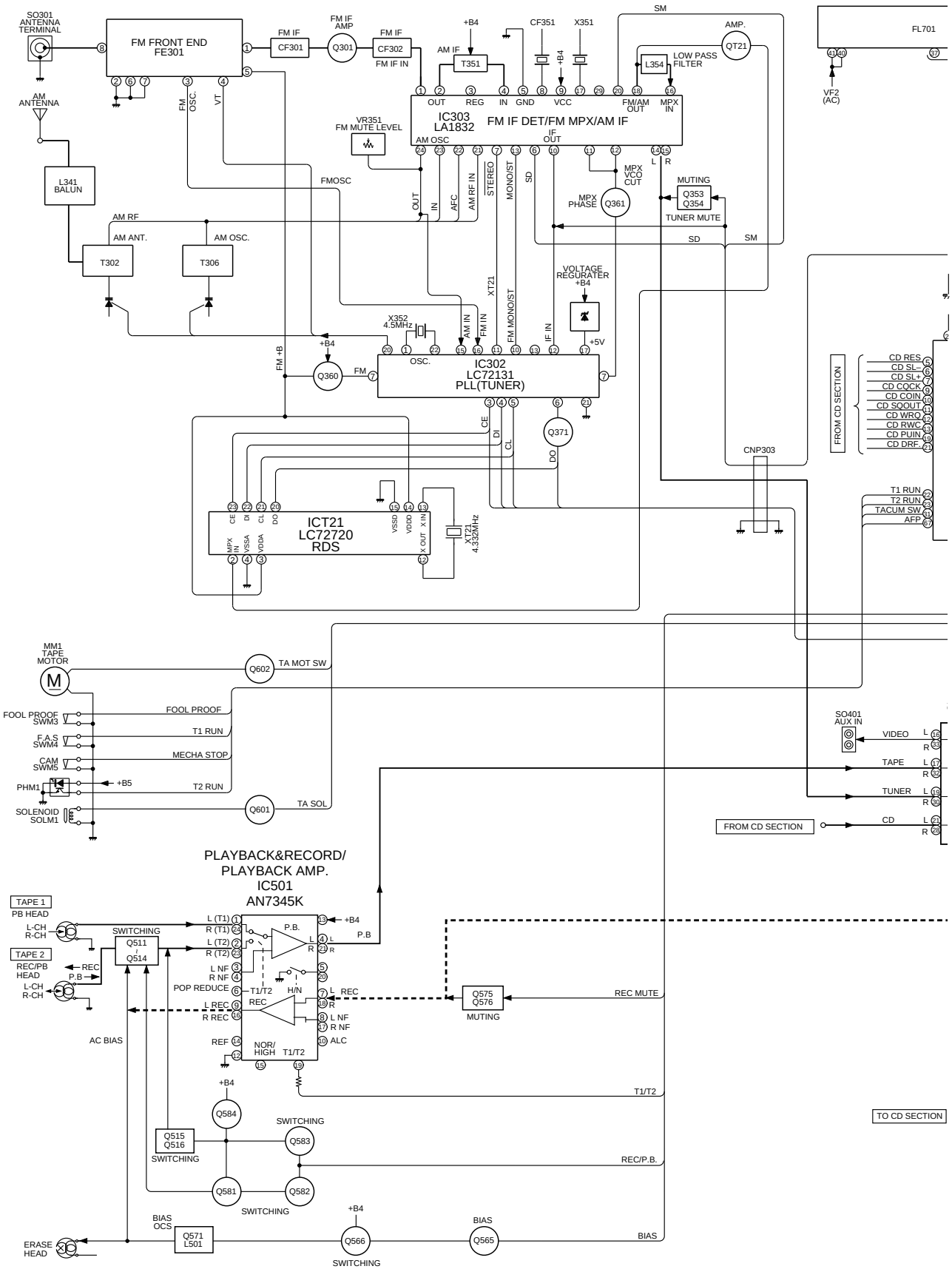


Figure 18 BLOCK DIAGRAM (2/3)

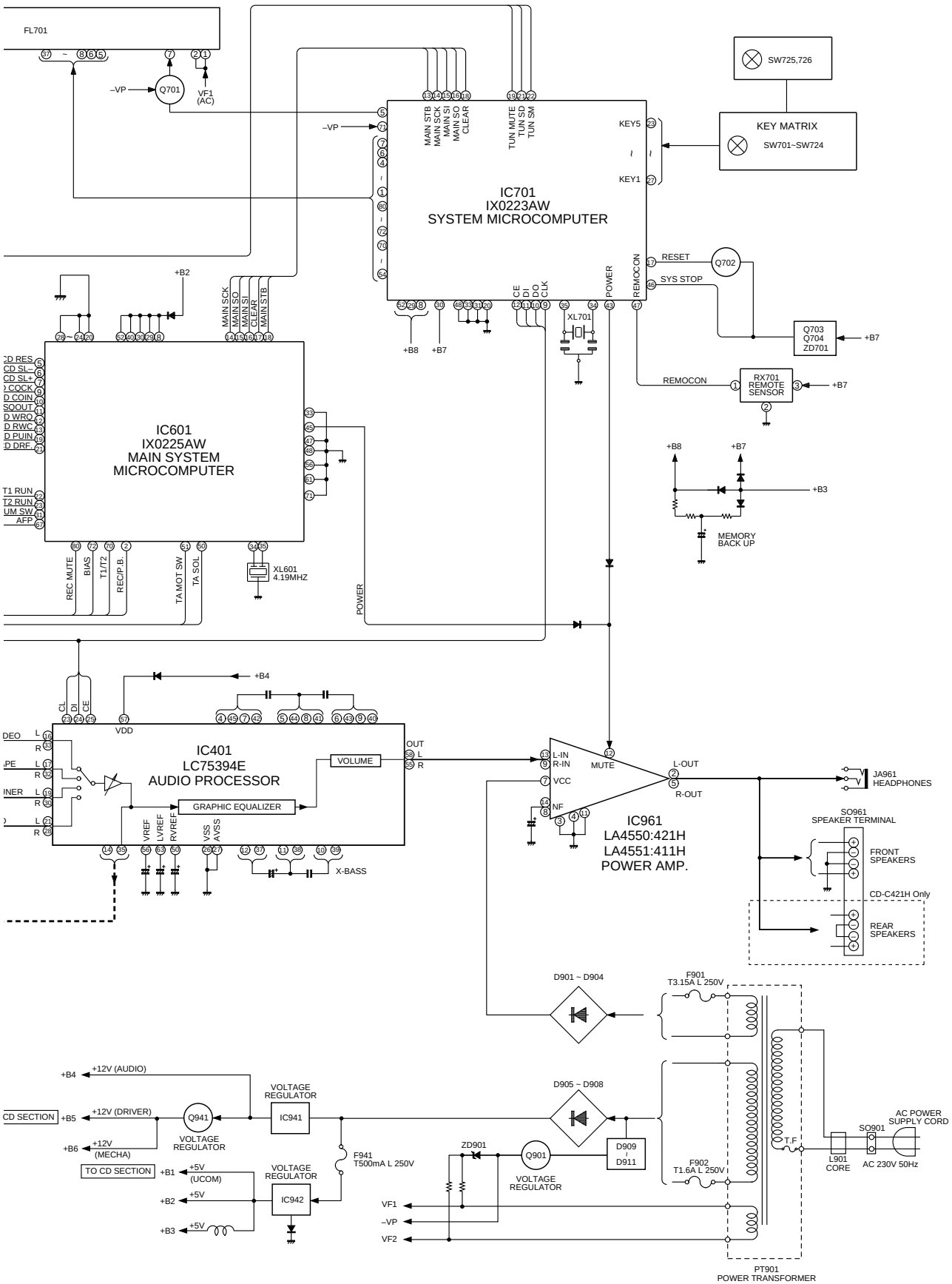
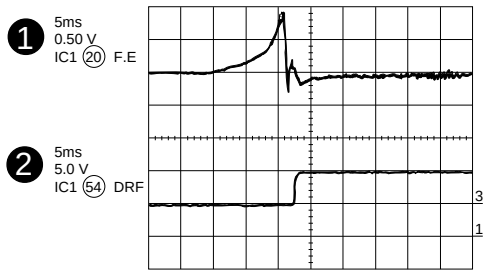


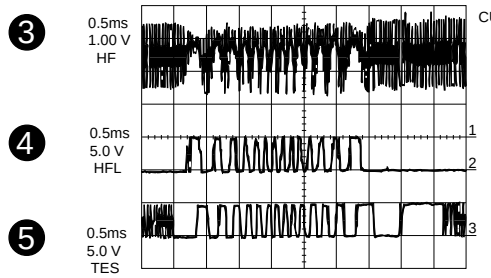
Figure 19 BLOCK DIAGRAM (3/3)

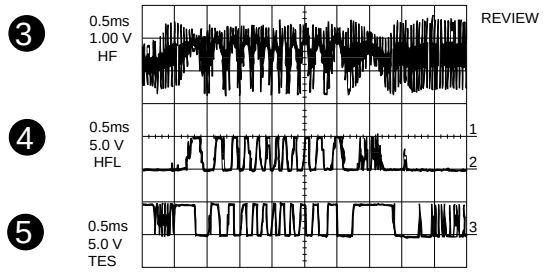
WAVEFORMS OF CD CIRCUIT

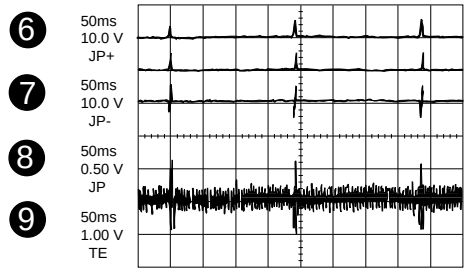
STOP → PLAY

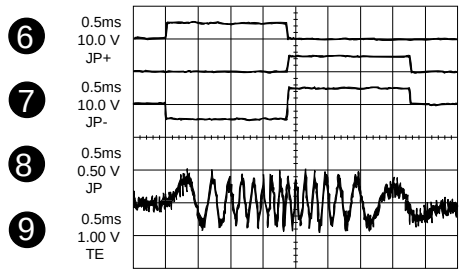
FOCUS — SERCH

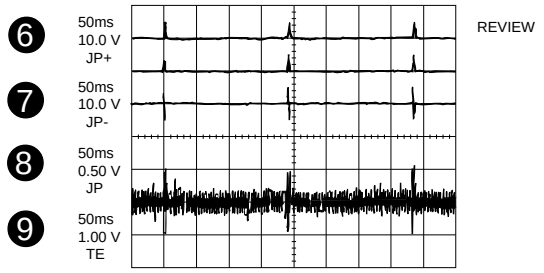


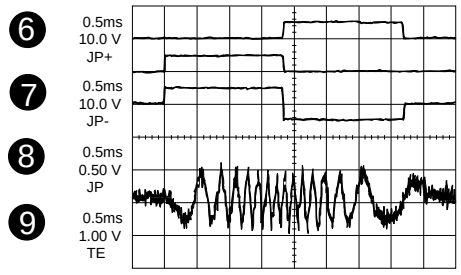








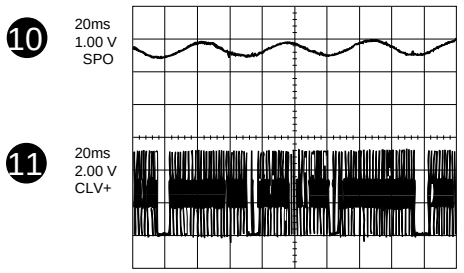




PLAY

NORMAL DISC

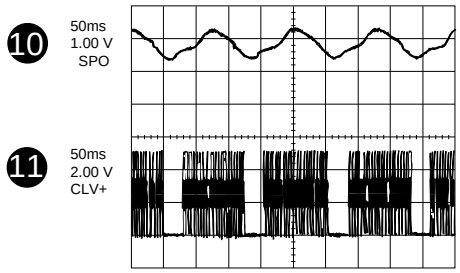
TN0=01



PLAY

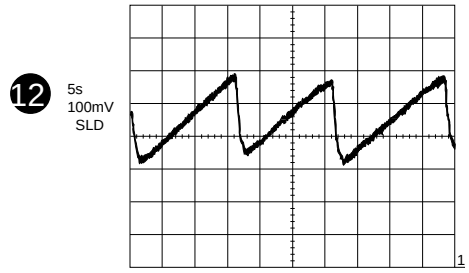
TCD-712 (140mm)

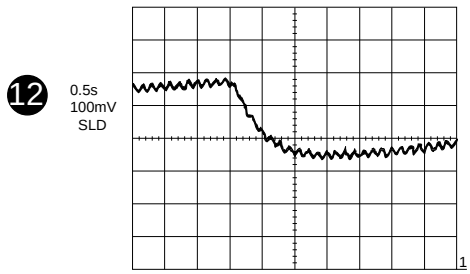
TN0=01



PLAY

TCD-712





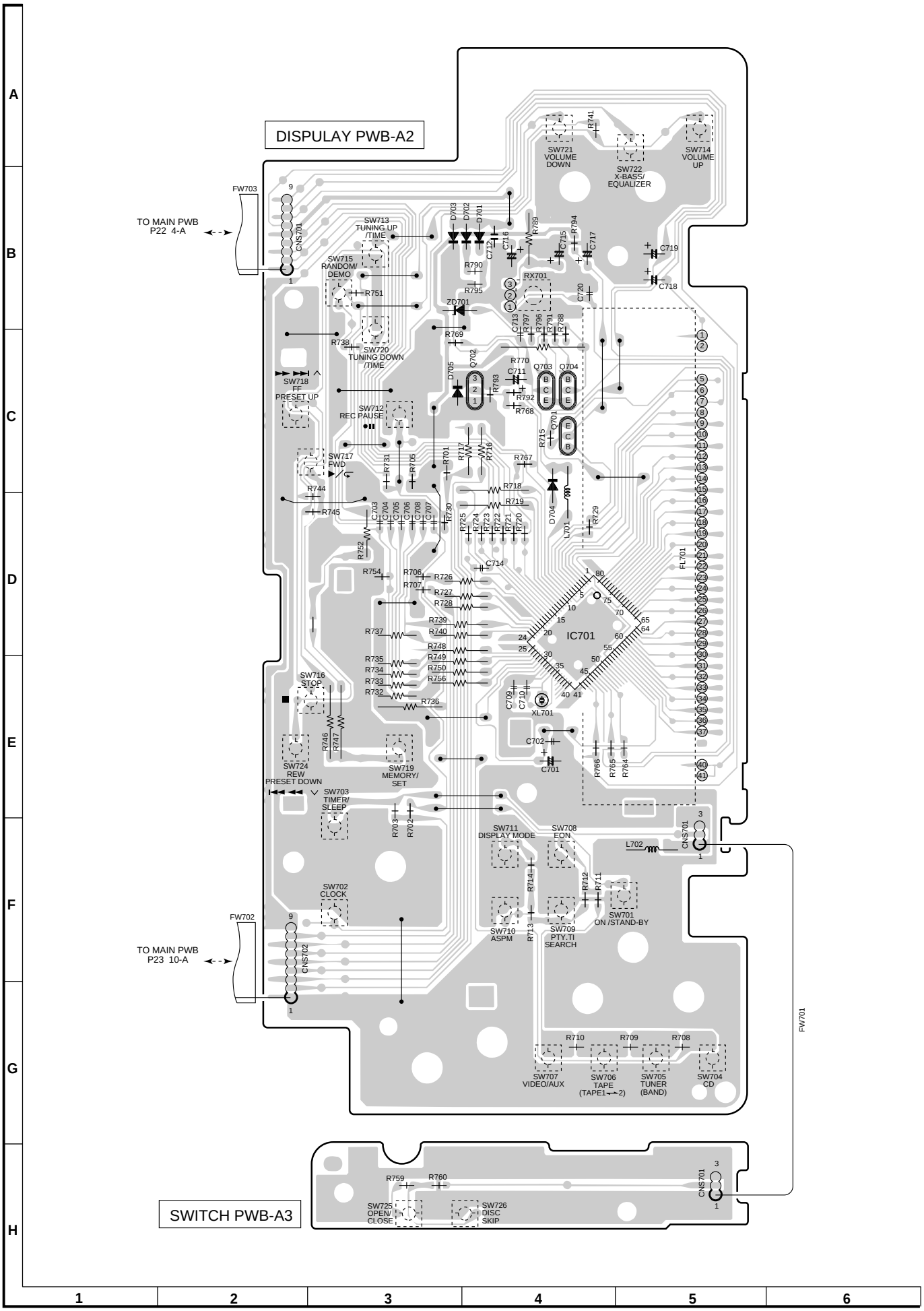
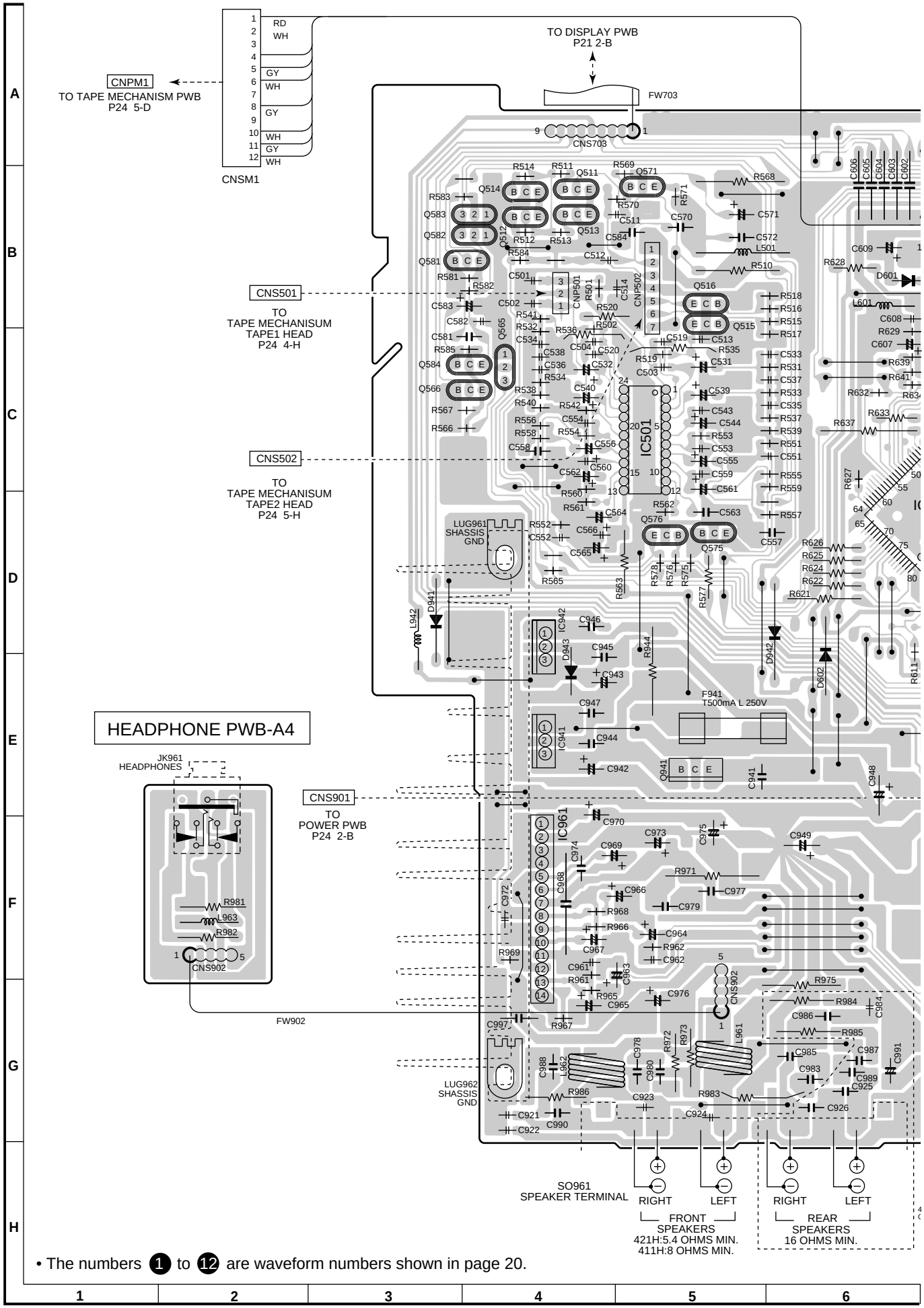
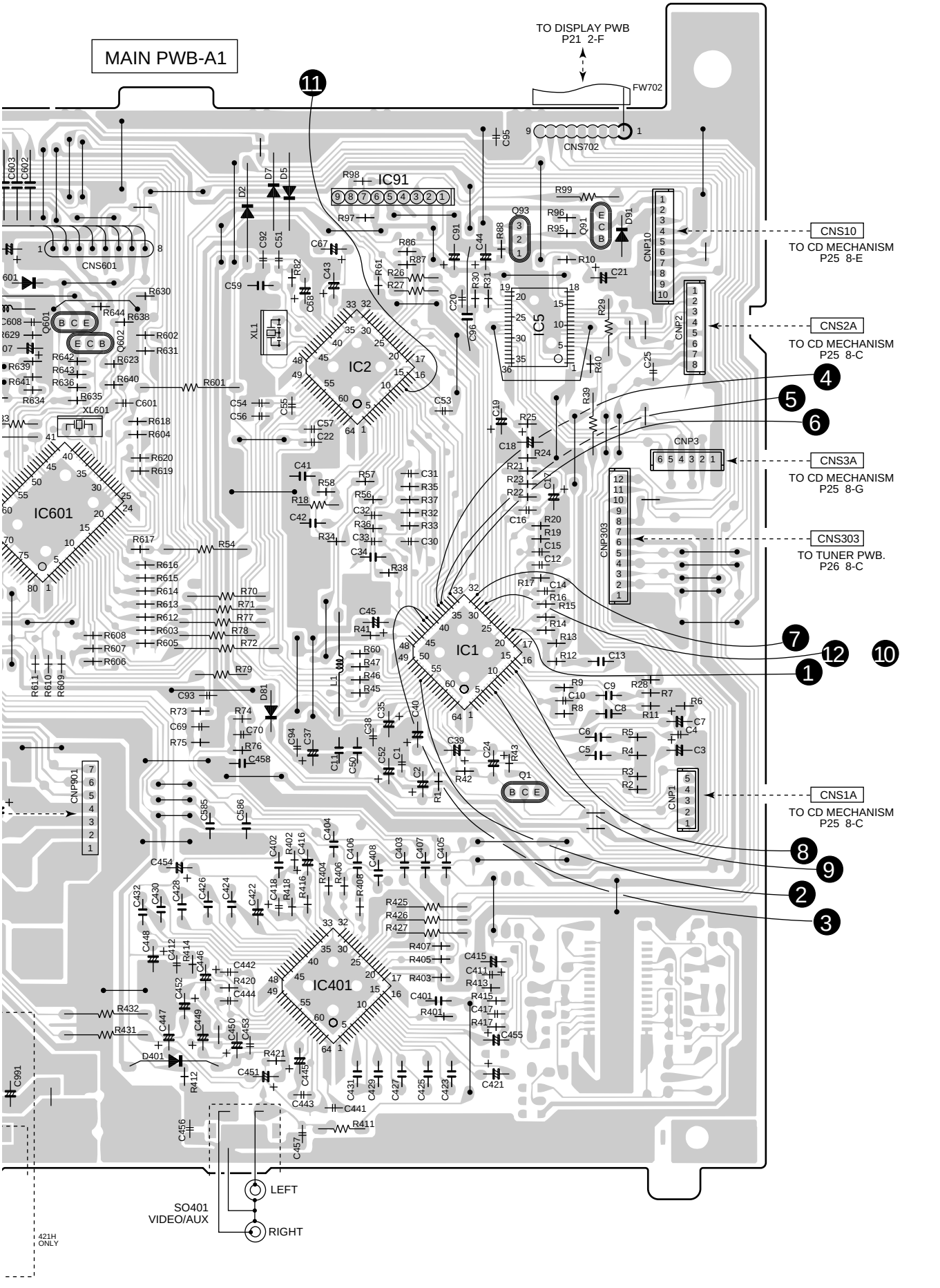


Figure 21 WIRING SIDE OF P.W.BOARD (1/6)



• The numbers ❶ to ⓬ are waveform numbers shown in page 20.

Figure 22 WIRING SIDE OF P.W.BOARD (2/6)



7	8	9	10	11	12

Figure 23 WIRING SIDE OF P.W.BOARD (3/6)

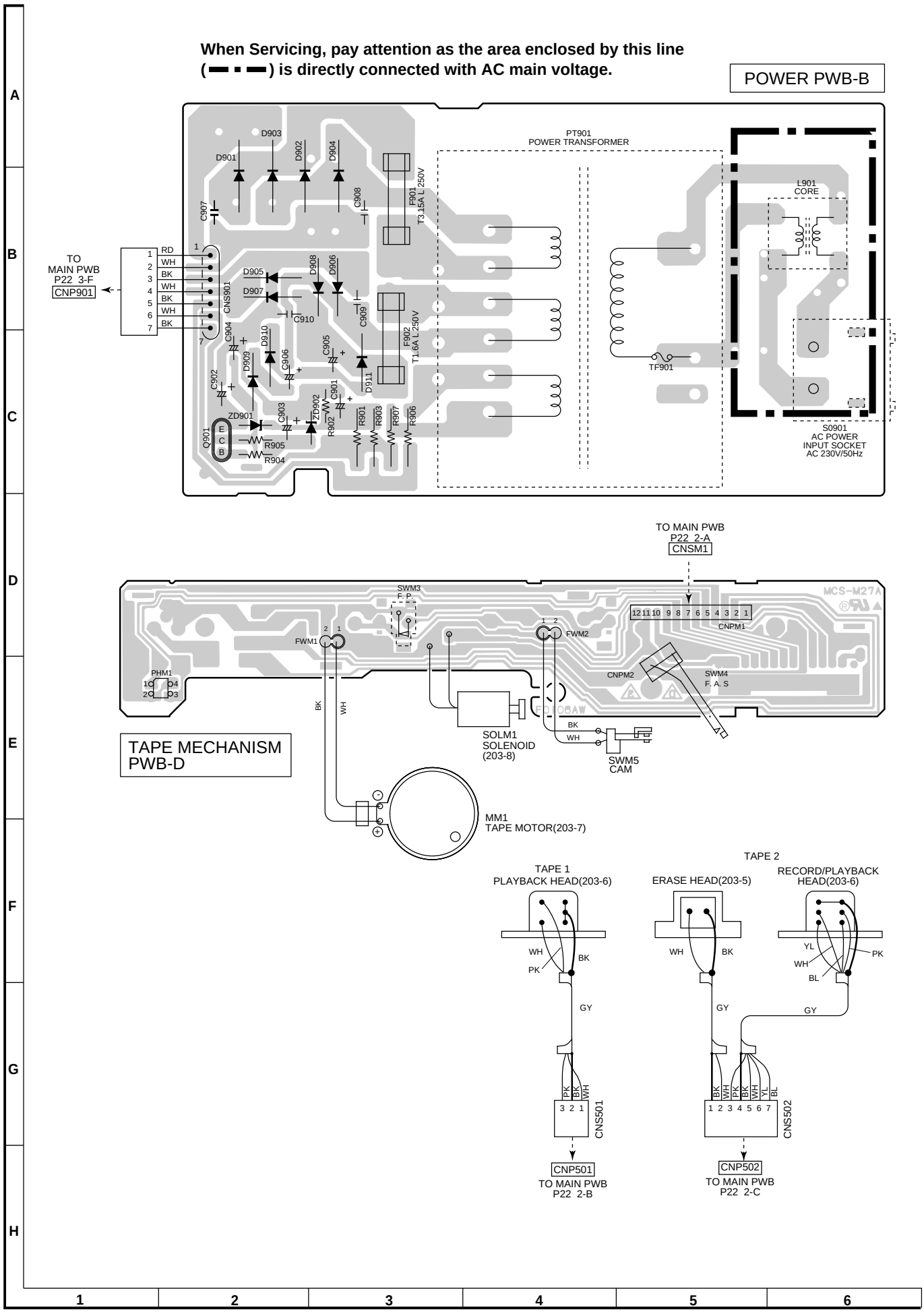
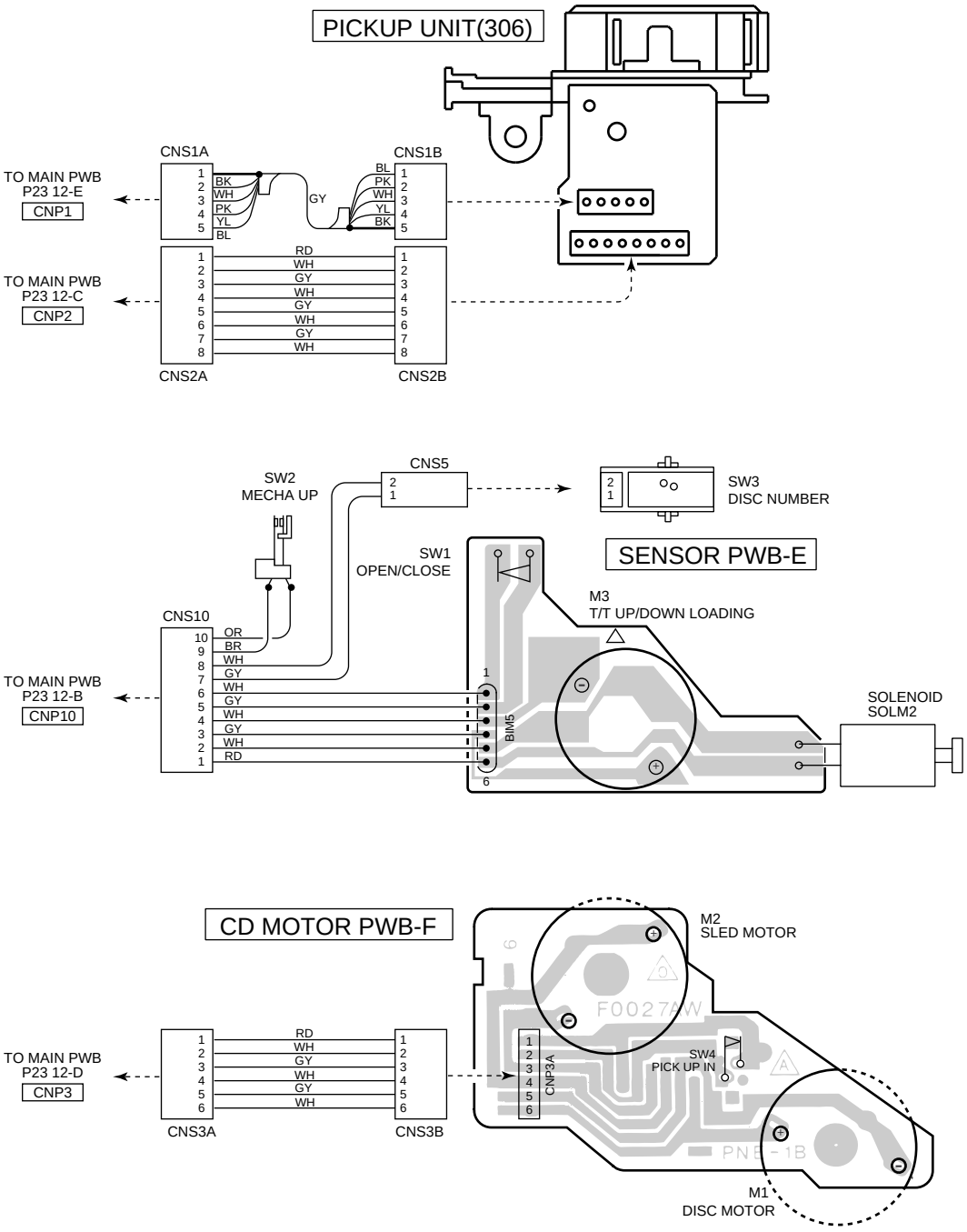
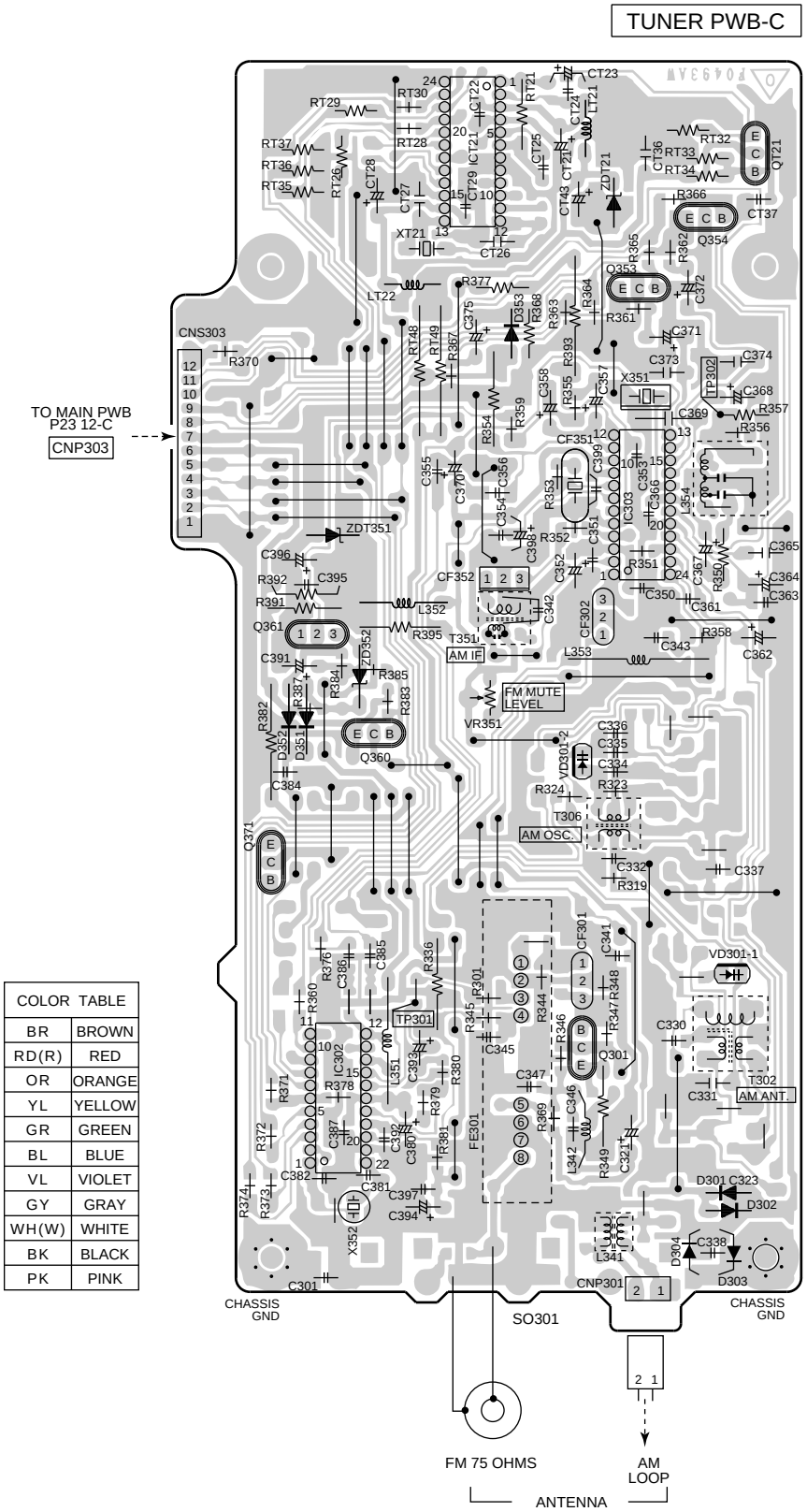


Figure 24 WIRING SIDE OF P.W.BOARD (4/6)



7	8	9	10	11	12

Figure 25 WIRING SIDE OF P.W.BOARD (5/6)



7	8	9	10	11	12

Figure 26 WIRING SIDE OF P.W.BOARD (6/6)

IC1	
PIN NO.	VOLTAGE
1	2V
2	2V
3	2.1V
4	2.1V
5	2V
6	2V
7	2V
8	2V
9	2V
10	2V
11	2V
12	2V
13	2V
14	2V
15	2V
16	2V
17	2V
18	2V
19	2V
20	2V
21	2V
22	0V
23	2V
24	2V
25	2V
26	2V
27	2V
28	2V
29	2V
30	1.8V
31	1.8V
32	0V
33	0V
34	4V
35	4V
36	0V
37	0V
38	4V
39	0V
40	0V
41	0.3V
42	2V
43	2.1V
44	2.1V
45	0V
46	2V
47	2V
48	0V
49	0V
50	2V
51	4V
52	4V
53	0V
54	4V
55	4V
56	4V
57	2.1V
58	2.1V
59	0V
60	0V
61	2V
62	3.4V
63	0V
64	4V

IC2	
PIN NO.	VOLTAGE
1	0V
2	0V
3	0V
4	0V
5	1.8V
6	4V
7	0V
8	0V
9	2V
10	2V
11	0V
12	0V
13	0V
14	4V
15	0V
16	0V
17	4V
18	4V
19	0V
20	0V
21	2V
22	0V
23	4V
24	0V
25	0V
26	0V
27	0V
28	0V
29	0V
30	4V
31	2V
32	0V
33	0V
34	0V
35	4V
36	3.8V
37	1.7V
38	0V
39	0V
40	1.7V
41	4V
42	4V
43	4V
44	1.8V
45	1.7V
46	0V
47	0V
48	1.8V
49	0V
50	2V
51	0V
52	2V
53	0V
54	0V
55	0V
56	4.4V
57	4.4V
58	4.4V
59	0V
60	1.6V
61	2V
62	0V
63	0V
64	0V

IC5	
PIN NO.	VOLTAGE
1	2V
2	2V
3	0V
4	2V
5	2V
6	2.2V
7	2.2V
8	0V
9	0V
10	0V
11	0V
12	0V
13	2.2V
14	0V
15	2V
16	0V
17	0V
18	0V
19	0.7V
20	5.2V
21	2V
22	2V
23	2V
24	2V
25	2.2V
26	0V
27	0V
28	0V
29	0V
30	2.2V
31	2.2V
32	2V
33	2V
34	0V
35	0V
36	0V

IC91	
PIN NO.	VOLTAGE
1	0V
2	5.1V
3	0.1V
4	0V
5	0V
6	5.1V
7	0V
8	4.2V
9	0V

IC501	
PIN NO.	VOLTAGE
1	0V
2	0V
3	0.6V
4	3V
5	0V
6	1.3V
7	0V
8	0.6V
9	3V
10	3V
11	0V
12	0V
13	6V
14	3.7V
15	0V
16	3V
17	0.6V
18	0V
19	0.8V
20	0V
21	3V
22	0.6V
23	0V
24	0V

IC301	
PIN NO.	VOLTAGE
1	1V(0V)
2	1.7V(0V)
3	5.6V(0.4V)
4	1.7V(0V)
5	0V(0V)
6	5.7V(0.4V)
7	5V(0.3V)
8	5.6V(0.3V)
9	5.7V(0.3V)

IC302	
PIN NO.	VOLTAGE
1	1.2V(1.2V)
2	0V(0V)
3	0V(0V)
4	4.6V(4.6V)
5	0V(0V)
6	4.5V(4.5V)
7	0.4V(11.3V)
8	0V(0V)
9	0V(0V)
10	1.1V(0V)
11	5.5V(5.5V)
12	0V(0V)
13	0.5V(0.1V)
14	0V(0V)
15	0V(2.6V)
16	1.5V(0V)
17	5.6V(5.3V)
18	1.2V(1V)
19	1.2V(1V)
20	3.8V(1.2V)
21	0V(0V)
22	2.8V(2.6V)

IC303	
PIN NO.	VOLTAGE
1	2V(2V)
2	2V(2V)
3	7.2V(8.2V)
4	0.5V(0.8V)
5	2V(2V)
6	0V(0V)
7	5.5V(5.5V)
8	0V(0V)
9	2.6V(2.6V)
10	2.6V(2.6V)
11	6.3V(8.2V)
12	1.2V(1.2V)
13	1.4V(0V)
14	2.2V(2V)
15	1.3V(1.4V)
16	2V(1.9V)
17	2V(2V)
18	1.6V(1.6V)
19	0.6V(0.7V)
20	7.2V(8.2V)
21	7.2V(8.2V)
22	2V(2V)
23	2V(2V)
24	2V(2V)

IC401	
PIN NO.	VOLTAGE
1	5V
2	5V
3	5V
4	5V
5	5V
6	5V
7	5V
8	5V
9	5V
10	5V
11	5V
12	5V
13	5V
14	5V
15	5.1V
16	4.7V
17	4.7V
18	0V
19	4.7V
20	0V
21	4.7V
22	0V
23	0V
24	4.4V
25	0V
26	0V
27	0V
28	4.7V
29	0V
30	4.7V
31	0V
32	4.7V
33	4.7V
34	5.1V
35	5.1V
36	5.1V
37	5.1V
38	5.1V
39	5.1V
40	5.1V
41	5.1V
42	5.1V
43	5.1V
44	5.1V
45	5.1V
46	5.1V
47	5.1V
48	5V
49	5.1V
50	5.1V
51	5.1V
52	5.1V
53	5.1V
54	0V
55	5.1V
56	5.1V
57	10.2V
58	5.1V
59	0V
60	5.1V
61	5.1V
62	5.1V
63	5.1V
64	5.1V

IC701			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	–24.7V	41	0.41V
2	–24.7V	42	0V
3	–24.7V	43	0V
4	–24.7V	44	4.4V
5	–24.7V	45	0V
6	–24.7V	46	4.4V
7	–24.7V	47	4.4V
8	4.4V	48	0V
9	0V	49	2.7V
10	4.4V	50	11.7V
11	4.4V	51	11.7V
12	0.24V	52	4.4V
13	0V	53	4.4V
14	4.4V	54	4.4V
15	4.4V	55	0V
16	0.12V	56	0V
17	0V	57	4.4V
18	4.4V	58	0V
19	0V	59	0V
20	0V	60	0V
21	0V	61	–21.2V
22	3.8V	62	–18V
23	0V	63	–11.5V
24	0V	64	–27.8V
25	4.4V	65	–24.5V
26	4.4V	66	–14.8V
27	4.4V	67	–24.5V
28	0.6V	68	–21.2V
29	4.4V	69	–27.8V
30	0V	70	–18V
31	4.4V	71	–28V
32	0V	72	–11.5V
33	2V	73	–24.4V
34	2V	74	–24.4V
35	0V	75	14.7V
36	0V	76	–27.8V
37	0V	77	–24.4V
38	4.4V	78	–27.8V
39	4.4V	79	–27.8V
40	0V	80	–24.8V

IC961	
PIN NO.	VOLTAGE
1	24.7V
2	14.19V
3	0V
4	0V
5	14.05V
6	24.8V
7	27.8V(C411H)/31.8V(C421H)
8	1.24V
9	5.3mV
10	26.7V
11	0V
12	2.25V
13	5.2mV
14	1.23V

IC941	
PIN NO.	VOLTAGE
1	17.2V
2	0V
3	12V

IC942	
PIN NO.	VOLTAGE
1	17.2V
2	0V
3	5V

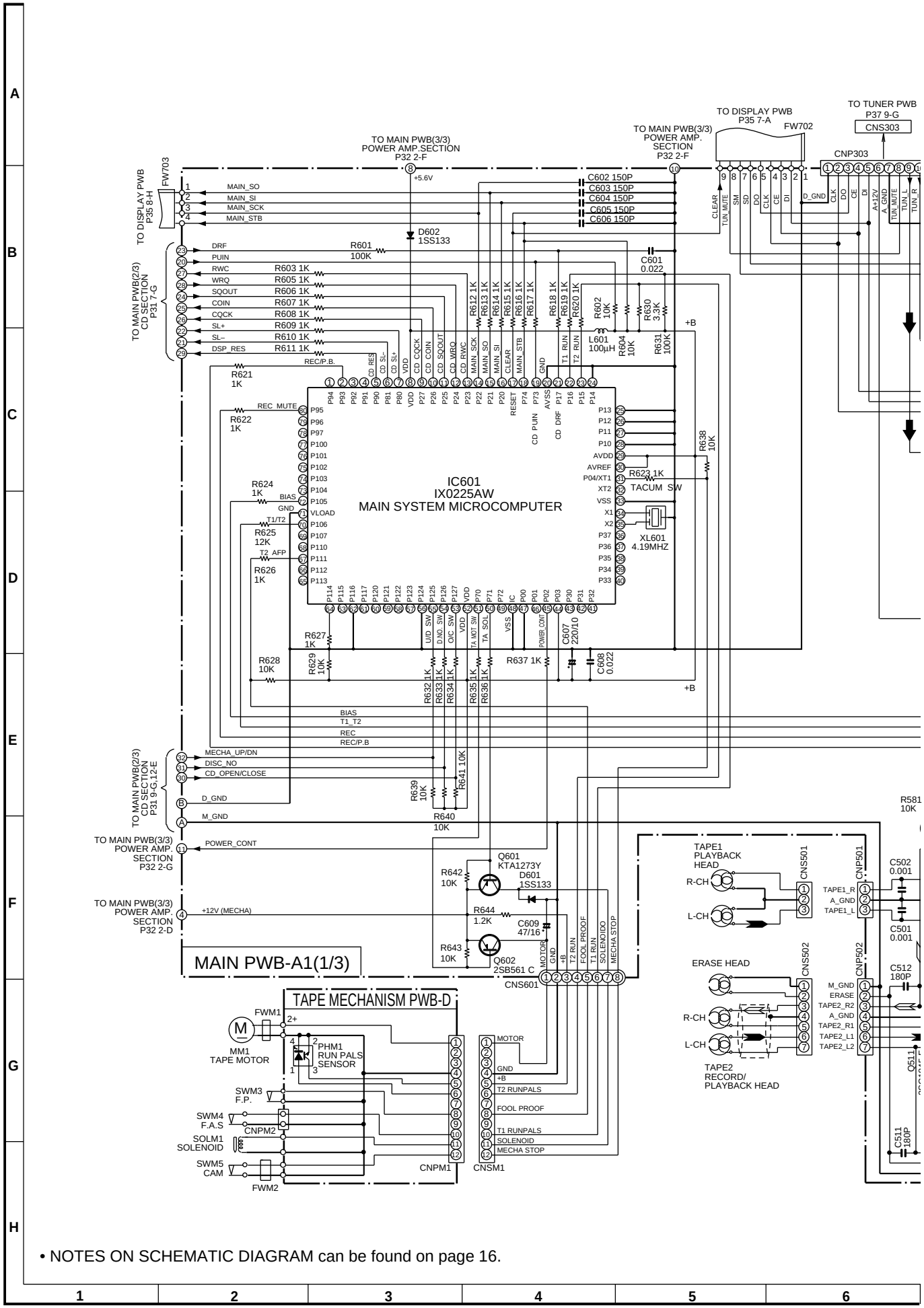
( ):AM
OTHER:FM(ST)

IC302	
PIN NO.	VOLTAGE
1	2.6V
2	0V
3	0V
4	0V
5	4.8V
6	0.5V(5V)
7	0.3V(12.3V)
8	12V(0V)
9	0.4V(0V)
10	4V(0V)
11	5.1V(5.1V)
12	0V
13	0V
14	0V
15	0V(2.5V)
16	2.5V(0V)
17	5.1V
18	0.9V
19	0.9V
20	1.9V(1.1V)
21	0V
22	2.6V

IC303	
PIN NO.	VOLTAGE
1	2.2V
2	5.1V
3	2.2V
4	2.2V
5	0V
6	5.0V
7	5.1V
8	2.9V(3.6V)
9	5.1V
10	3.5V(0.3V)
11	3.9V(1.9V)
12	3.9V(1.2V)
13	4.0V
14	1.4V
15	1.4V
16	2.2V
17	2.4V(0V)
18	2.4V(0.9V)
19	0V(1.9V)
20	0.9V(0.9V)
21	2.5V(2.1V)
22	2.5V(2.1V)
23	5.1V(5.1V)
24	3.6V(3.6V)

ICT21	
PIN NO.	VOLTAGE
1	2.6V(0.2V)
2	2.6V(0V)
3	5.2V(0V)
4	0V(0V)
5	2.6V(0V)
6	2.6V(0V)
7	0V(0V)
8	0V(0V)
9	0V
10	0V
11	0V
12	2.6V(0V)
13	2.7V(0V)
14	5.2V(0V)
15	0V(0V)
16	0V
17	0V
18	0V
19	0V(0.6V)
20	0V(5V)
21	4.8V(4.8V)
22	0V(0V)
23	0V(0V)
24	0V(0V)

Figure 27 SCHEMATIC DIAGRAM (1/11)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 16.

Figure 28 SCHEMATIC DIAGRAM (2/11)

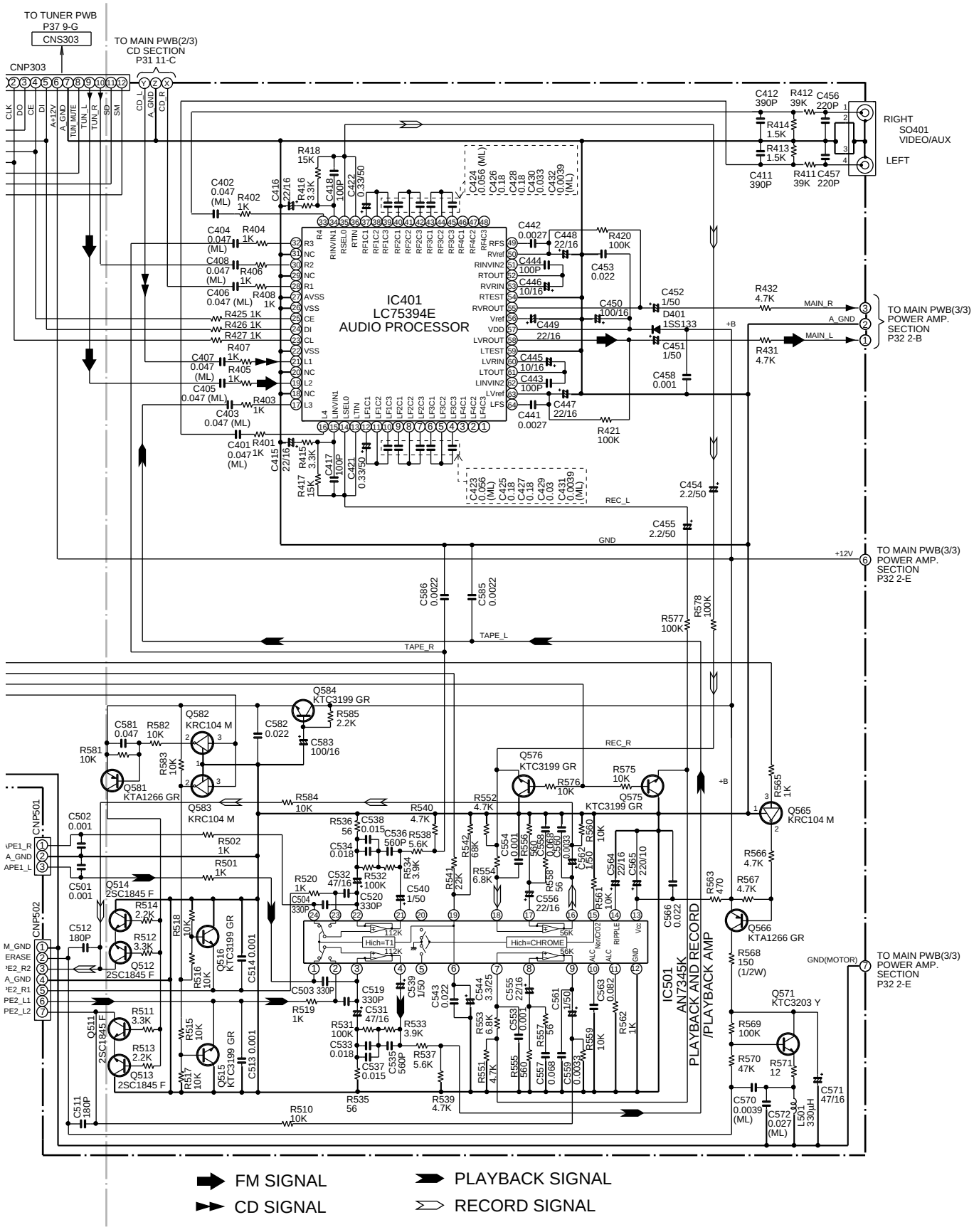
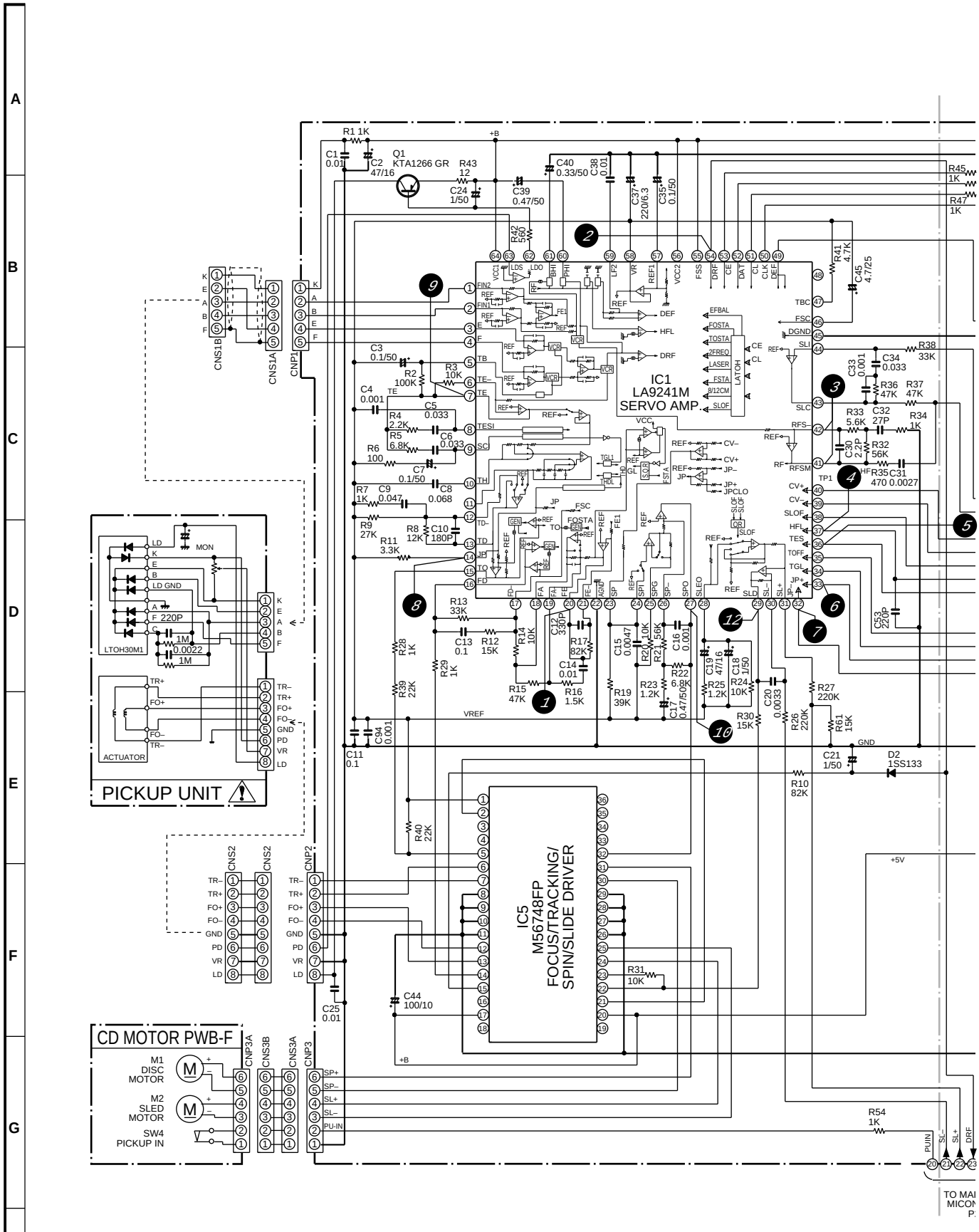
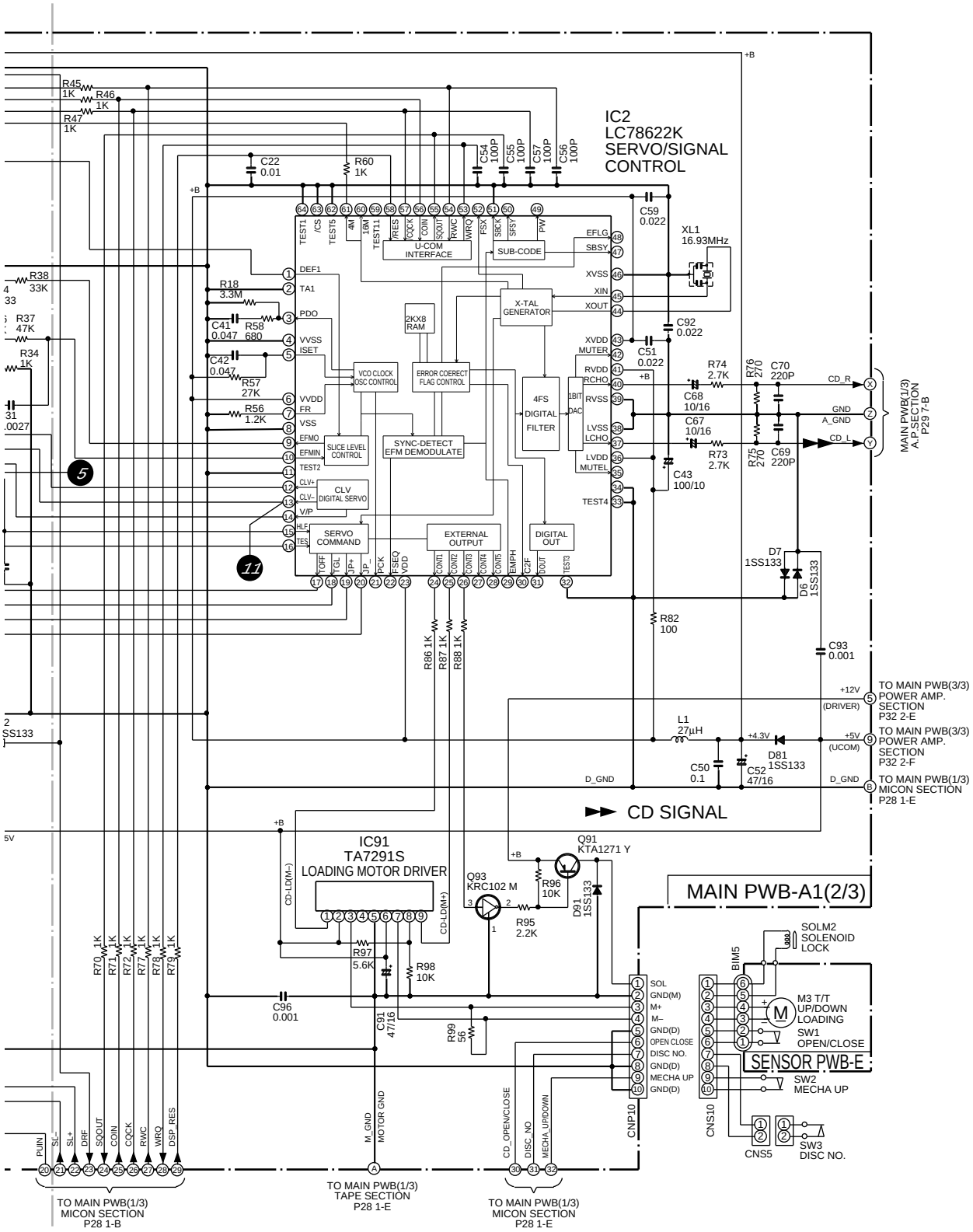


Figure 29 SCHEMATIC DIAGRAM (3/11)



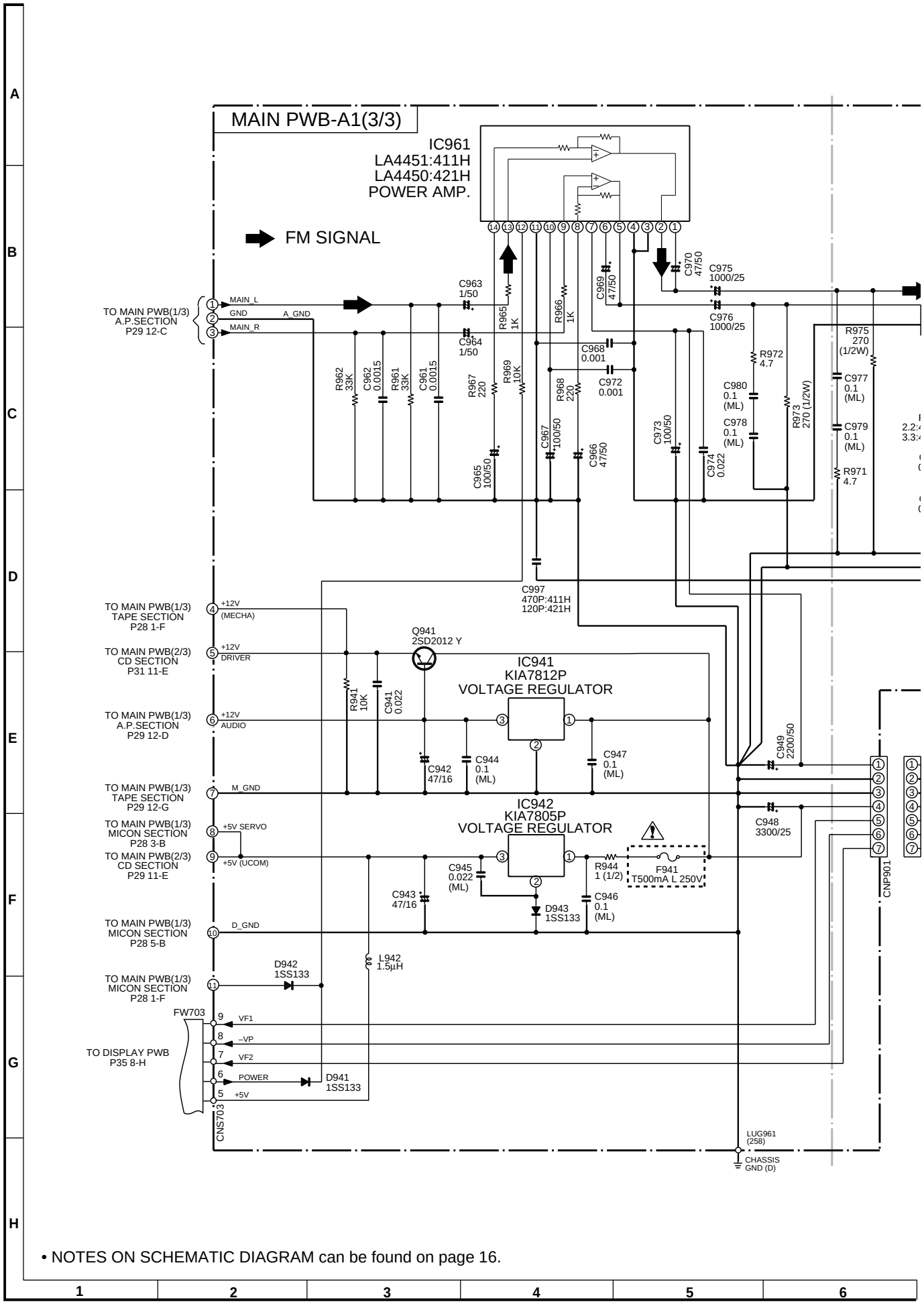
- The numbers ❶ to ⓬ are waveform numbers shown in page 20.
- NOTES ON SCHEMATIC DIAGRAM can be found on page 16.

Figure 30 SCHEMATIC DIAGRAM (4/11)



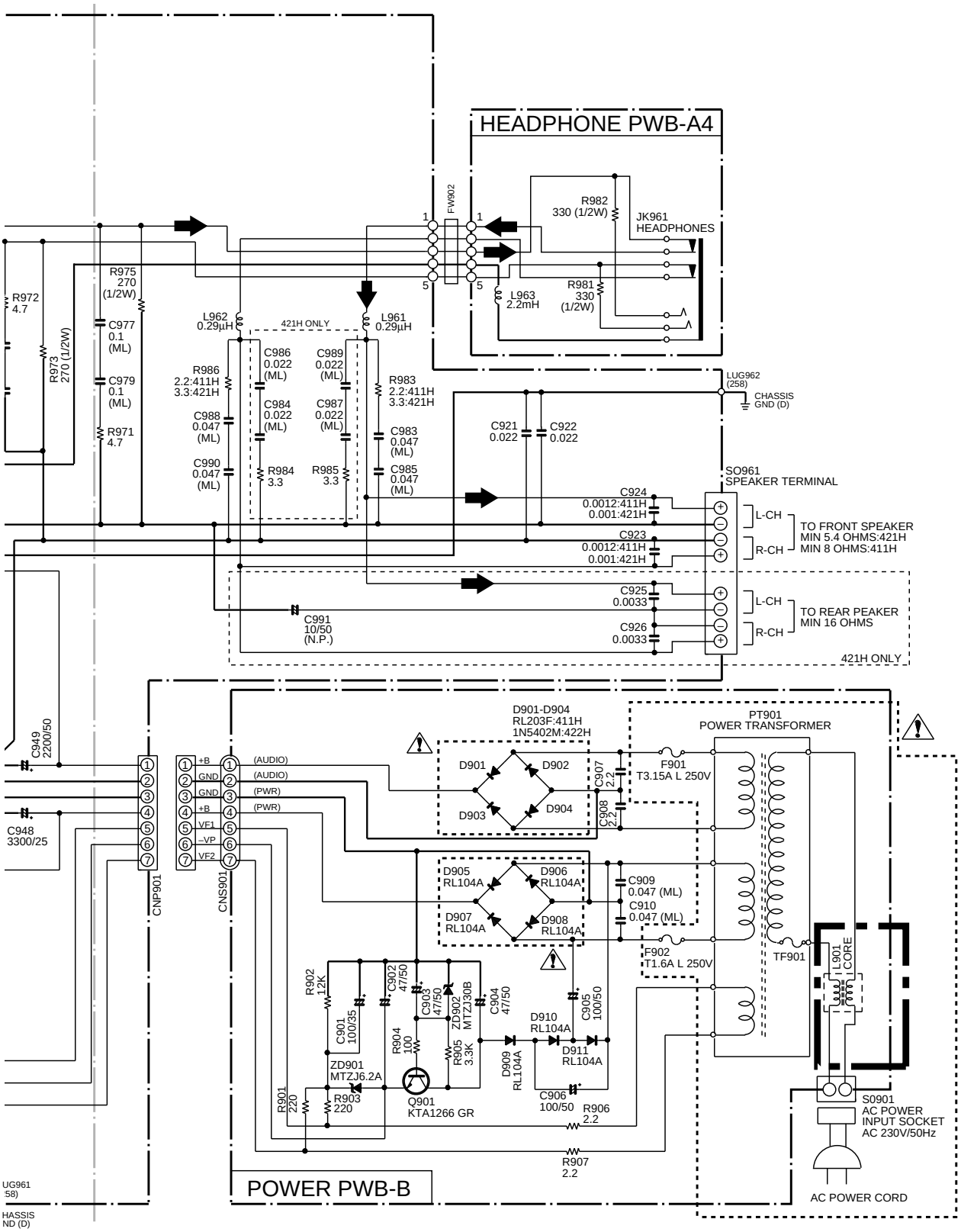
7	8	9	10	11	12

Figure 31 SCHEMATIC DIAGRAM (5/11)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 16.

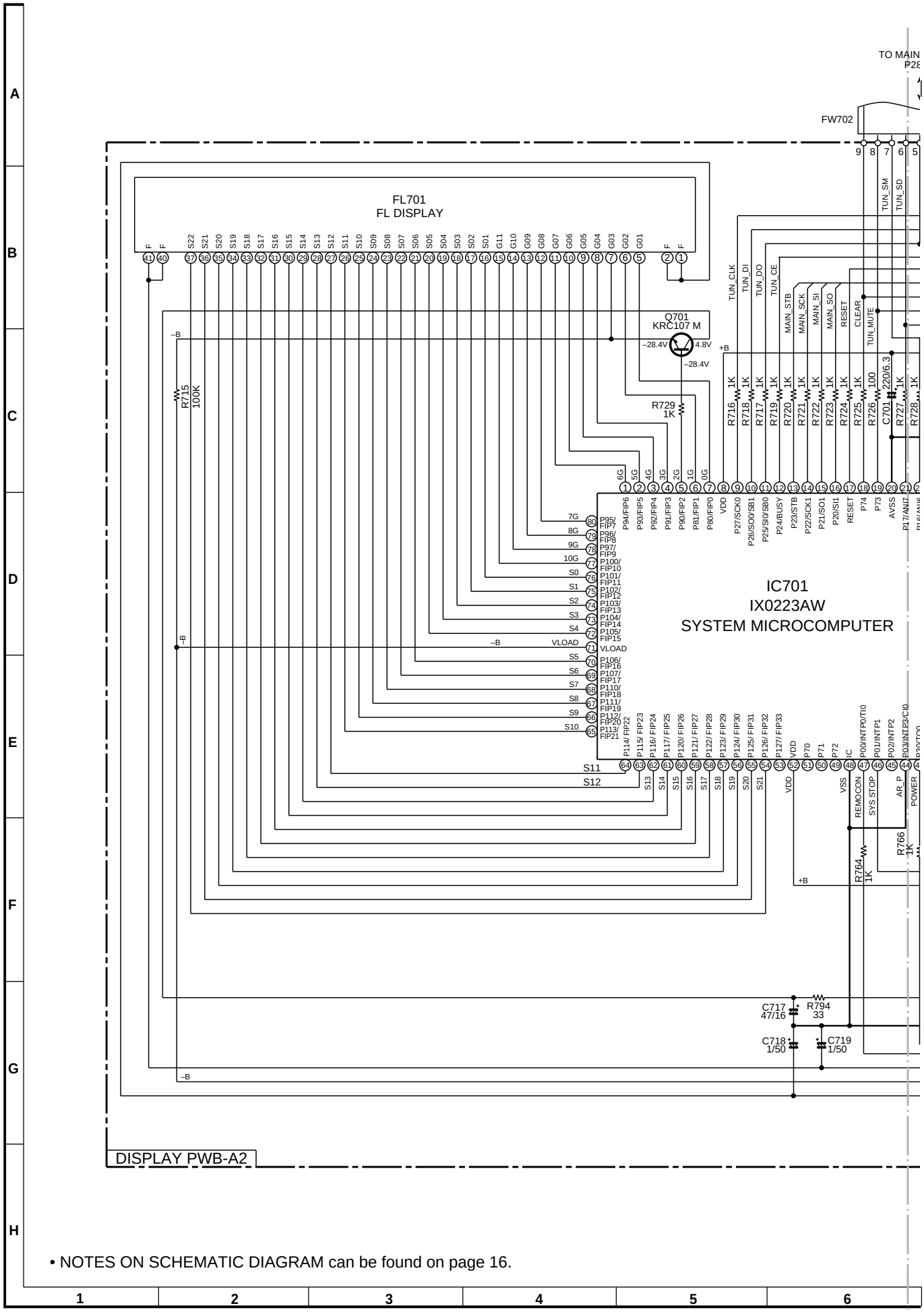
Figure 32 SCHEMATIC DIAGRAM (6/11)



When Servicing, pay attention as the area enclosed by this line (▬ ▪ ▬) is directly connected with AC main voltage.

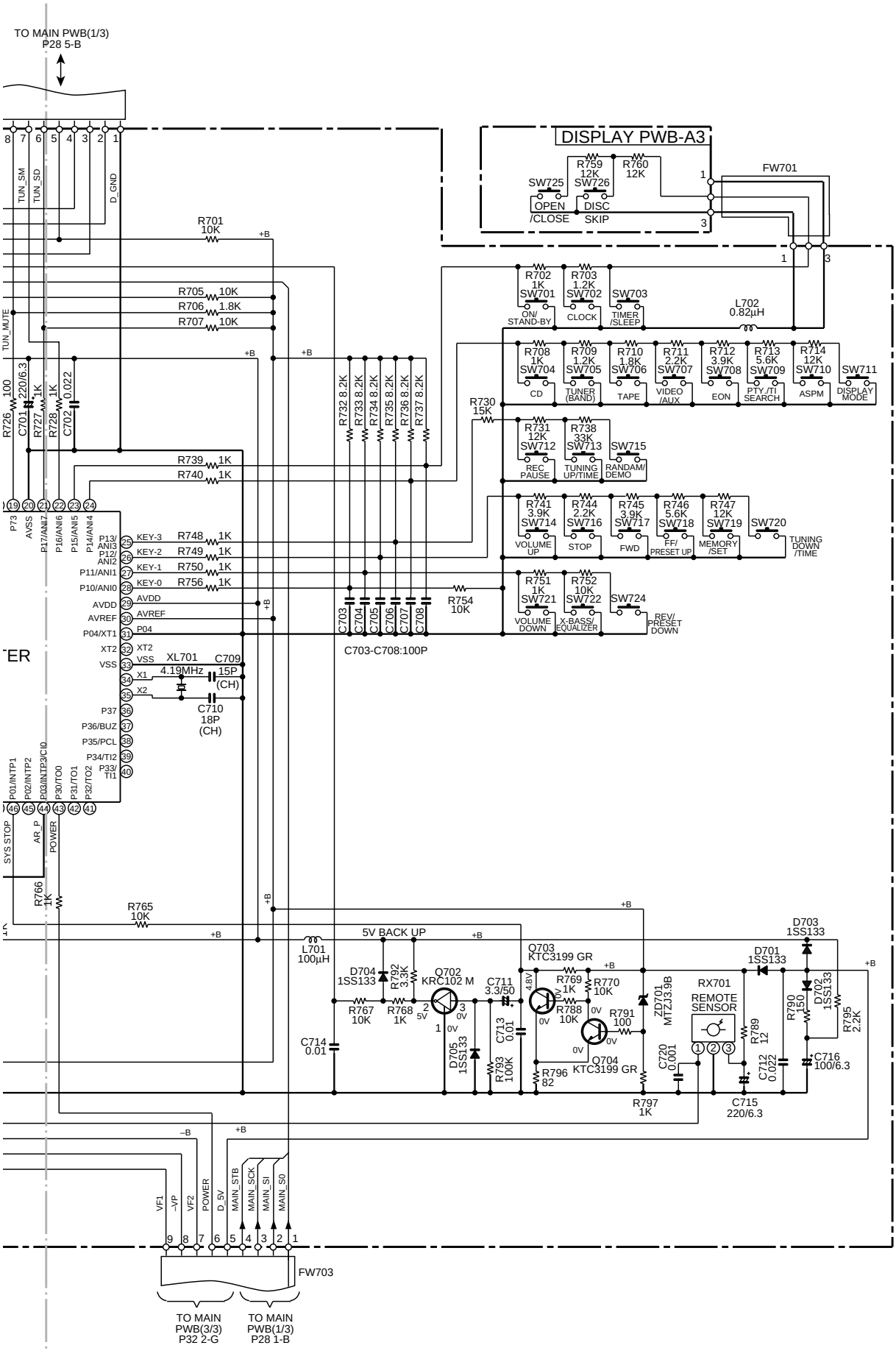
7	8	9	10	11	12

Figure 33 SCHEMATIC DIAGRAM (7/11)



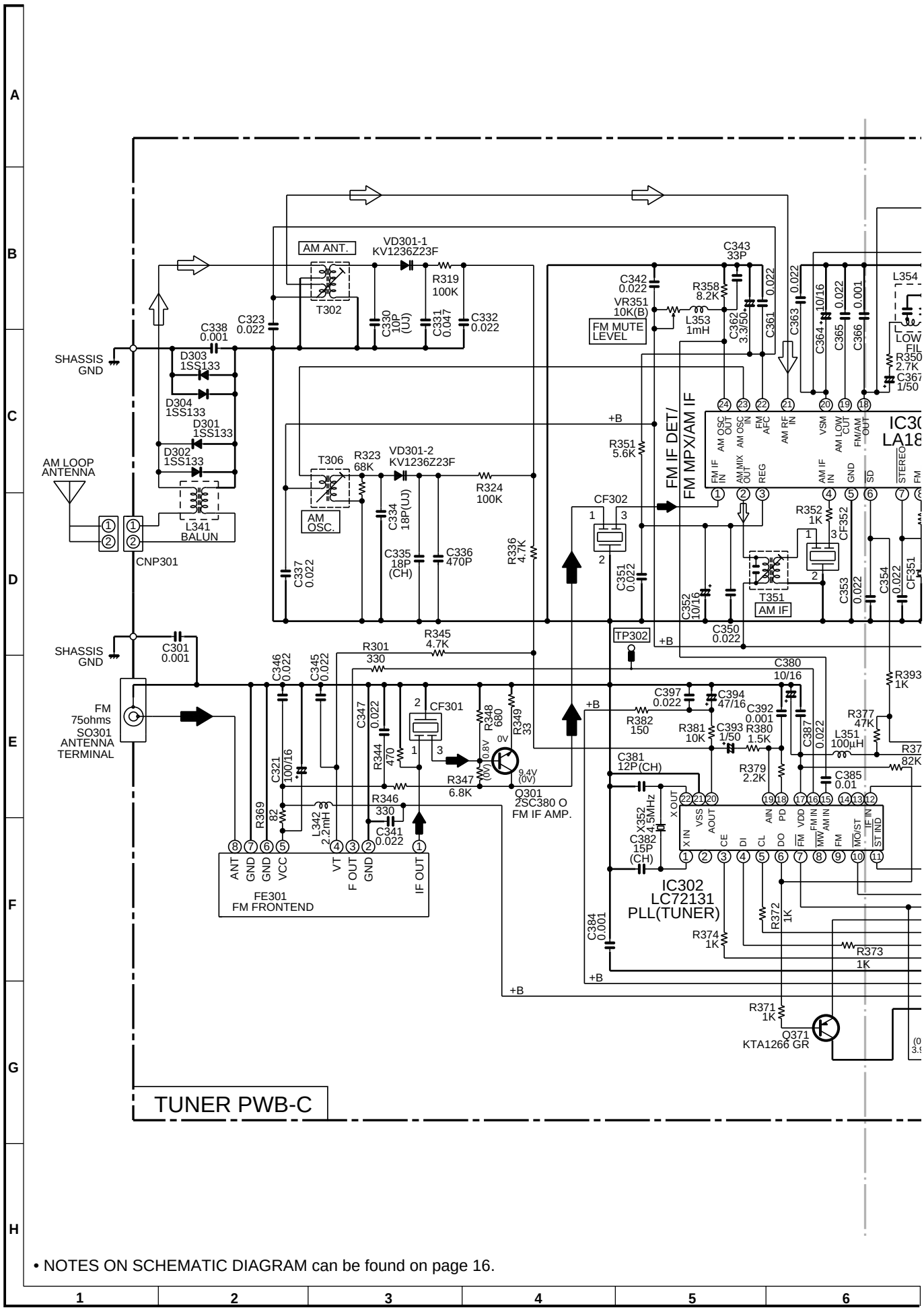
• NOTES ON SCHEMATIC DIAGRAM can be found on page 16.

Figure 34 SCHEMATIC DIAGRAM (8/11)



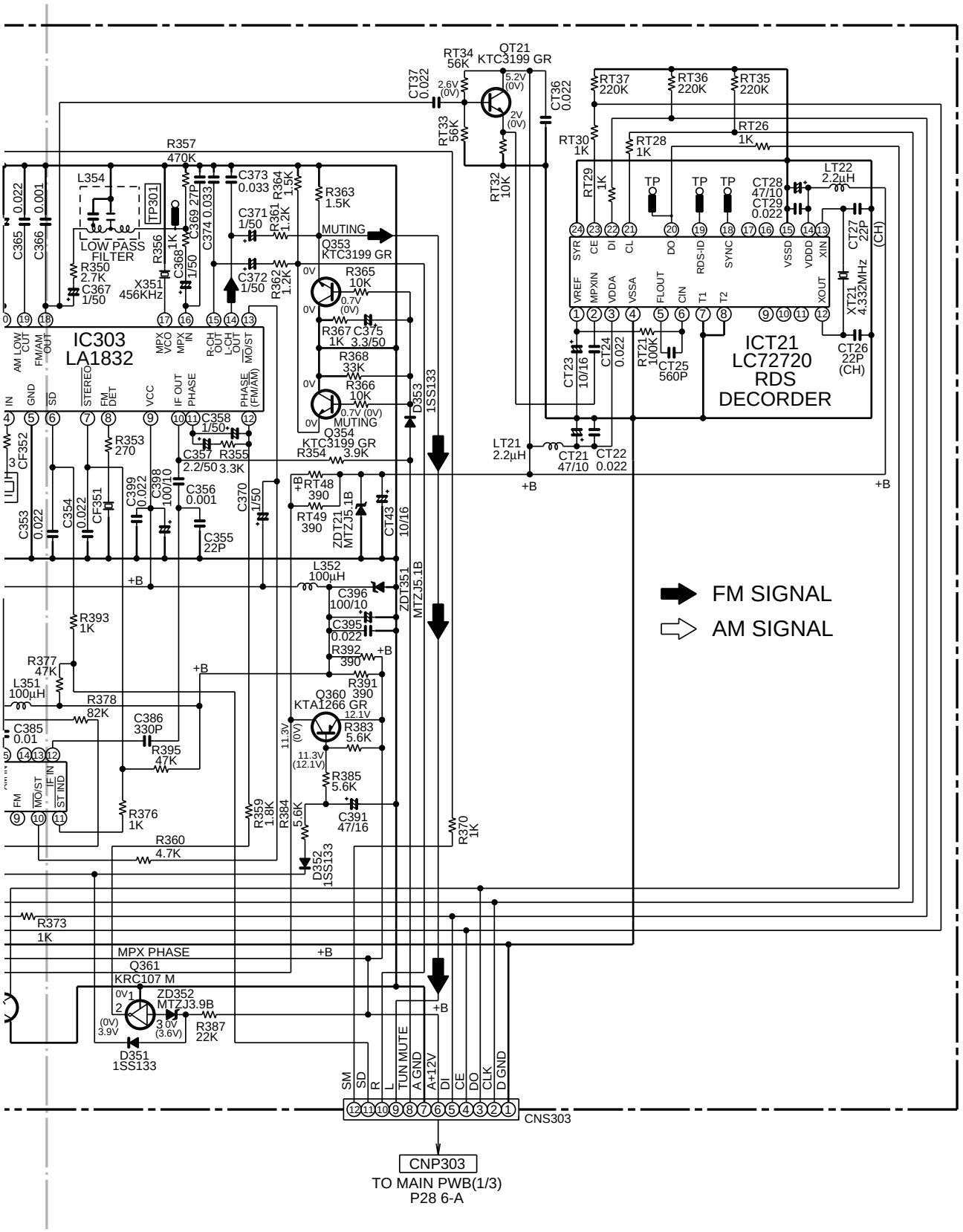
7	8	9	10	11	12

Figure 35 SCHEMATIC DIAGRAM (9/11)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 16.

Figure 36 SCHEMATIC DIAGRAM (10/11)



7	8	9	10	11	12

Figure 37 SCHEMATIC DIAGRAM (11/11)

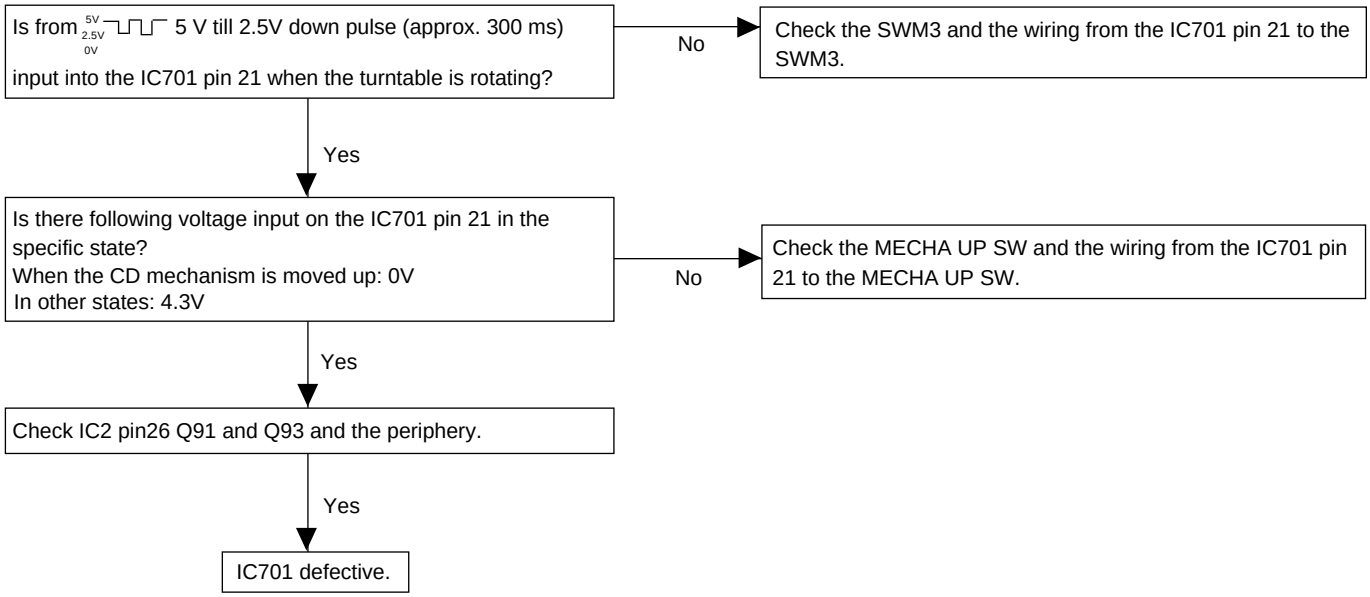
TROUBLESHOOTING (CD SECTION)

When the CD does not function

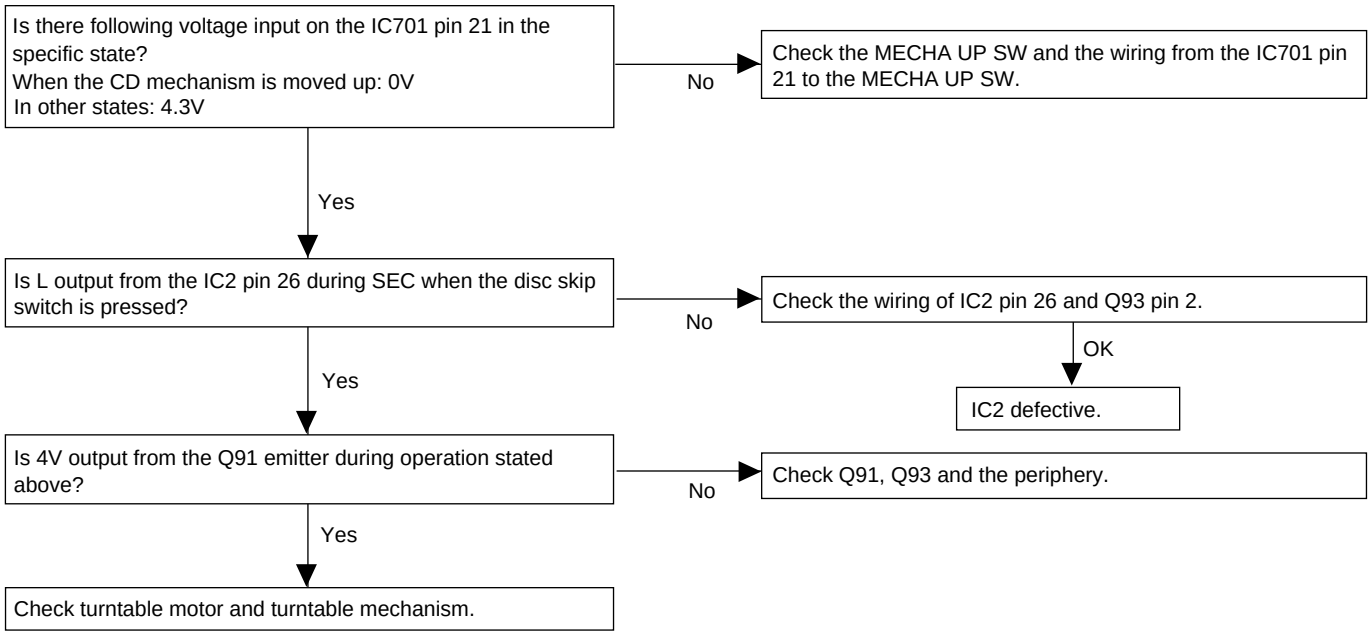
When the CD section does not operate When the objective lens of the optical pickup is dirty,this section may not operate.Clean the objective lens,and check the playback operation.When this section does not operate even after the above step is taken,check the following items.
Remove the cabinet and follow the troubleshooting instructions.
"Track skipping and/or no TOC(Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn the power off.
Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.
Do not touch the lens with the bare hand.

• When the turntable fails to stop.


Is from 5V 2.5V 0V 5 V till 2.5V down pulse (approx. 300 ms) input into the IC701 pin 21 when the turntable is rotating?
No
Check the SWM3 and the wiring from the IC701 pin 21 to the SWM3.
Yes
Is there following voltage input on the IC701 pin 21 in the specific state?
When the CD mechanism is moved up: 0V
In other states: 4.3V
No
Check the MECHA UP SW and the wiring from the IC701 pin 21 to the MECHA UP SW.
Yes
Check IC2 pin26 Q91 and Q93 and the periphery.
Yes
IC701 defective.

• When turntable fails to move.


Is there following voltage input on the IC701 pin 21 in the specific state?
When the CD mechanism is moved up: 0V
In other states: 4.3V
No
Check the MECHA UP SW and the wiring from the IC701 pin 21 to the MECHA UP SW.
Yes
Is L output from the IC2 pin 26 during SEC when the disc skip switch is pressed?
No
Check the wiring of IC2 pin 26 and Q93 pin 2.
OK
IC2 defective.
Yes
Is 4V output from the Q91 emitter during operation stated above?
No
Check Q91, Q93 and the periphery.
Yes
Check turntable motor and turntable mechanism.

• When the CD tray fails to open or close.

Is there following voltage input in specific state of IC701 pin 19?
Open state: 0V
Close state: 0V
Intermediate state between open state and close state: 4.3V

No → Check the OPEN CLOSE SW and the wiring from the IC701 pin 19 to the OPEN CLOSE SW.

Yes ↓

Is H output to IC2 pin 24 or 25 for 7 seconds when the OPEN/CLOSE key is pressed?IC91 is defective. Replace it.

No → Check the wiring of the IC2 pins 24 and 25, IC91 pins 1 and 3.

OK ↓

IC2 defective.

Yes ↓

Is 4V output between IC91 pins 3 and 7 during operation stated above?

No → Check the periphery of IC91.

OK ↓

IC91 defective.

Yes ↓

Check the loading motor (M3) and the loading mechanism.

• The CD function will not work.

The CD operating keys don't work.

Yes ↓

Check the CD, DSP, power supply, and 16.93 MHz clock, and reset terminal.

Yes ↓

Check the waveform of SCK, SO (DATA) and SI (COMM).

Yes ↓

See if the pick-up is in the PICKUP IN SW position.

Yes ↓

If the items mentioned above are OK, check the main microcomputer IC701.

• The CD operating keys work.

Check the Focus - HF system.

Playback can be performed without a disc.

Yes ↓

Does the pick-up move up and down twice?

Yes → Focus search OK

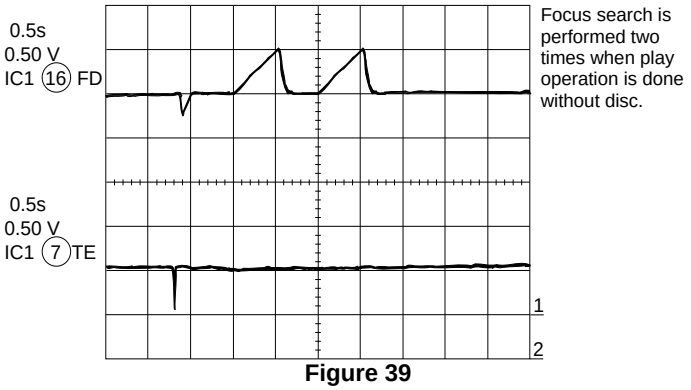
No ↓

Does the output waveform of IC1(16)(FD) match that shown in Fig. 39?

Yes → Check the area around IC5-CNP2.

No ↓

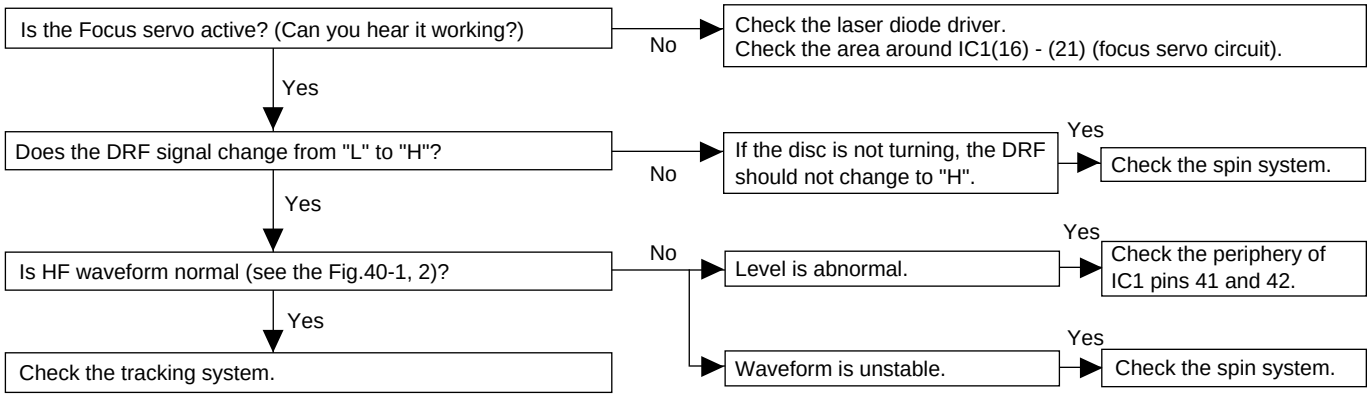
Check the IC1(50)(CLK) line, 4MHz.
Check the microcomputer data on pins (51)(CL), (52)(DAT) and (53)CE.



Focus search is performed two times when play operation is done without disc.

Figure 39

• Playback can only be performed when a disc is loaded.


Is the Focus servo active? (Can you hear it working?)
No
Check the laser diode driver.
Check the area around IC1(16) - (21) (focus servo circuit).
Yes
Does the DRF signal change from "L" to "H"?
No
If the disc is not turning, the DRF should not change to "H".
Yes
Check the spin system.
Yes
Is HF waveform normal (see the Fig.40-1, 2)?
No
Level is abnormal.
Yes
Check the periphery of IC1 pins 41 and 42.
Yes
Check the tracking system.
Waveform is unstable.
Yes
Check the spin system.

HF
1.0V/DIV
0.5µsec/DIV(DC)
(When playing back the disc)

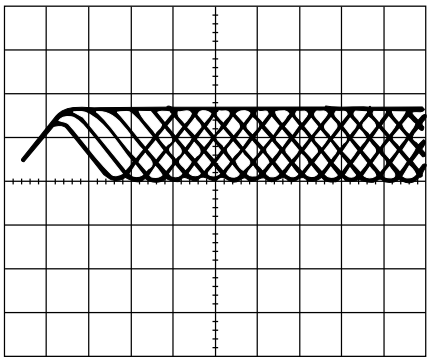


Figure 40-1

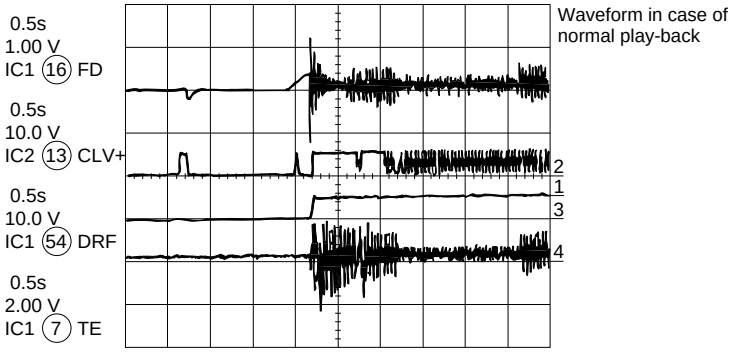
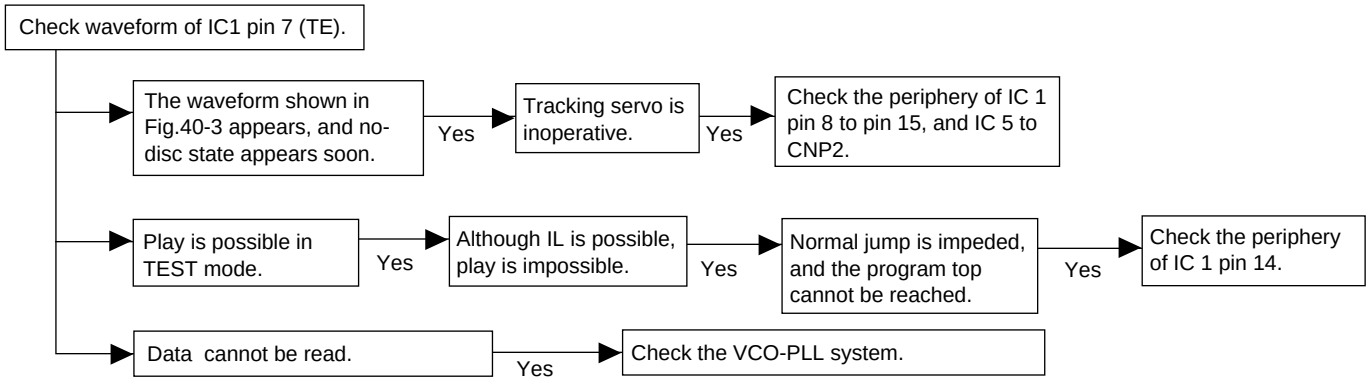


Figure 40-2

• Check the tracking system.


Check waveform of IC1 pin 7 (TE).
The waveform shown in Fig.40-3 appears, and no-disc state appears soon.
Yes
Tracking servo is inoperative.
Yes
Check the periphery of IC 1 pin 8 to pin 15, and IC 5 to CNP2.
Play is possible in TEST mode.
Yes
Although IL is possible, play is impossible.
Yes
Normal jump is impeded, and the program top cannot be reached.
Yes
Check the periphery of IC 1 pin 14.
Data cannot be read.
Yes
Check the VCO-PLL system.

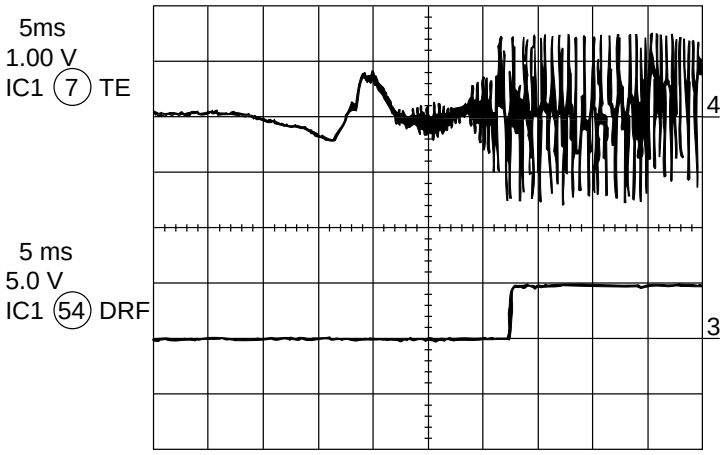


Figure 40-3

• Checking the spin system.

Play operation is performed without disc.

Yes

The turntable rotates a little. — Yes → The spin driver circuit is normal.

No

The turntable fails to rotate or rotates at high speed. — Yes → Check the periphery of IC1 pins 23 to 27, pin 39, and pin 40, IC2 pin 12 and pin 13, IC5 to CNP3.

• Checking the VCO-PLL system

Play operation is performed when disc exits.

Yes

Although HF waveform is normal, TOC data cannot be read. — Yes → Check PDO waveform (Fig. 41).

Abnormal

Check the IC1 pins 43 and 44, IC2 pins 3, 5, 7, 10, and 11.

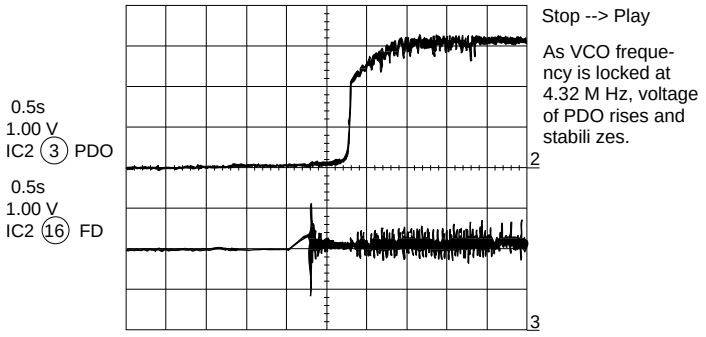


Figure 41

• Although HF waveform is normal and the time indication is normal, no sound is emitted.

Check IC 2 pin 48 (EFLG). — No → Usually, the number of pulses of flawless disc is 100 pulses/sec or less.

Yes

Check IC2 pins 37, 40.

Abnomal

Check IC 401 and POWER AMP IC 961.

FUNCTION TABLE OF IC

IC2 VHiLC78622K-1:Servo/Signal Control(LC78622K) (1/2)

Pin No.	Terminal Name	Input/Output	Function		
1	DEFI	Input	Input terminal of defect detection signal (DEF). (Connected to OV when not used.)		
2	TAI	Input	For PLL	Input terminal for test. Pull-down resistor is integrated. Surely connected to 0V.	
3	PDO	Output		Output terminal of phase comparison for external VCO control.	
4	VVSS	—		Ground terminal for integrated VCO. Surely connected to 0V.	
5	ISET	Input		Resistance connection terminal for current adjustment of PDO output.	
6	VVDD	—		Power terminal for integrated VCO.	
7	FR	Input		VCO frequency range adjustment.	
8	VSS	—	Ground terminal of digital system. Surely connected to 0V.		
9	EFMO	Output	For slice level control	EFM signal output terminal.	
10	EFMIN	Input		EFM signal input terminal.	
11	TEST2	Input	Input terminal for test. Pull-down resistor is integrated. Surely connected to 0V.		
12	CLV+	Outout	Output for disk motor control. 3 values can be output with the commands.		
13	CLV-	Output	Output for disk motor control. 3 values can be output with the commands.		
14	V/P	Output	Monitor output terminal for automatic switch of rough servo/phase control. "H" for rough servo, and "L" for phase servo.		
15	HLF	Intput	Input terminal of track detection signal. Schmit input.		
16	TES	Input	Input terminal of tracking error signal. Schmit input.		
17	TOFF	Output	Tracking OFF output terminal.		
18	TGL	Output	Output terminal for switch of tracking gain "L" increases the gain.		
19	JP+	Output	Output for track jump control. 3 values can be output with the commands.		
20	JP-	Output	Output for track jump control. 3 values can be output with the commands.		
21*	PCK	Output	Clock monitor terminal for EFM data replay. 4,3218MHz as the phase clock.		
22*	FSEQ	Output	Output terminal synchronous signal detection. "H" is output when synchronous signal detected by EFM signal matches synchronous signal internally generated.		
23	VDD	—	Power terminal of digital system.		
24	CONT1	Input/Output	General purpose input/output terminal 1	Controlled with serial data command from micro computer. When not used, set it as the input terminal and open it by connecting to 0V, or set it as the output terminal and open it.	
25	CONT2	Input/Output	General purpose input/output terminal 2		
26	CONT3	Input/Output	General purpose input/output terminal 3		
27*	CONT4	Input/Output	General purpose input/output terminal 4		
28*	CONT5	Input/Output	General purpose input/output terminal 5		
29*	EMPH	Output	Difference monitor terminal At "H", deemphasis disk is being replayed.		
30*	C2F	Output	C2 flag output terminal.		
31*	DOUT	Output	Output terminal of digital OUTPUT. (EIAJ format)		
32	TEST3	Input	Input terminal for test. Pull-down resistor is integrated. Surely connected to 0V.		
33	TEST4	Input	Input terminal for test. Pull-down resistor is integrated. Surely connected to 0V.		
34	N.C.	—	Terminal not used. Open during operation.		
35*	MUTEL	Output	L channel 1 bit DAC	Mute output terminal for L channel.	
36	LVDD	—		Power terminal for L channel.	
37	LCHO	Output		L channel output terminal.	
38	LVSS	—		Ground terminal for L channel Surely connected to 0V.	
39	RVSS	—	R channel 1 bit DAC	Ground terminal for R channel Surely connected to 0V.	
40	RCHO	Output		R channel output terminal.	
41	RVDD	—		Power terminal for R channel.	
42*	MUTER	Output		Mute output terminal for R channel.	
43	XVDD	—	Power terminal for quartz oscillation.		
44	XOUT	Output	Ground terminal of 16.9344 MHz quartz oscillator.		
45	XIN	Input	Ground terminal of 16.9344 MHz quartz oscillator.		
46	XVSS	—	Ground terminal for quartz oscillation. Surely connected to 0V.		
47*	SBSY	Output	Output terminal of synchronous signal of subcode block.		
48*	EFLG	Output	Correction monitor terminal of C1, C2, single and double.		

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

VHiLC78622K-1:Servo/Signal Control(LC78622K) (2/2)

Pin No.	Terminal Name	Input/Output	Function
49*	PW	Output	Output terminal of subcodes P, A, R, S, T, U and W.
50*	SFSY	Output	Output terminal of synchronous signal of subcode frame. It drops when subcode stands by.
51	SBCK	Input	Clock input terminal to read subcode. Schmit input (Connected to 0V when not used.)
52*	FSX	Output	Output terminal of synchronous signal of 7.35kHz divided from quartz oscillation.
53	WRQ	Output	Output terminal to stand by output of subcode Q.
54	RWC	Input	Input terminal of read/write. Schmit input.
55	SQOUT	Output	Output terminal of subcode Q.
56	COIN	Input	Command input terminal from microcomputer.
57	$\overline{\text{CQCK}}$	Input	Clock input terminal to fetch command input, or pick up subcode from SQOUT. Schmit input
58	$\overline{\text{RES}}$	Input	Reset input terminal of LC78622. When turning on power, set it at "L".
59*	TEST11	Output	Output terminal for test. Used in the open state ("L" output as ordinary).
60*	16M	Output	Output terminal of 16.9344Hz.
61	4.2M	Output	Output terminal of 4.2336MHz.
62	TEST5	Input	Input terminal for test Pull-down resistor is integrated. Surely connected to 0V.
63	$\overline{\text{CS}}$	Input	Chip selection input terminal. Pull-down resistor is integrated. Connected to 0when not controlled.
64	TEST1	Input	Input terminal for test Pull-down resistor is integrated. Surely connected to 0V.

Note: The same potential must be supplied to the power terminals (VDD, VVDD, LVDD, RVDD, XVDD).

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

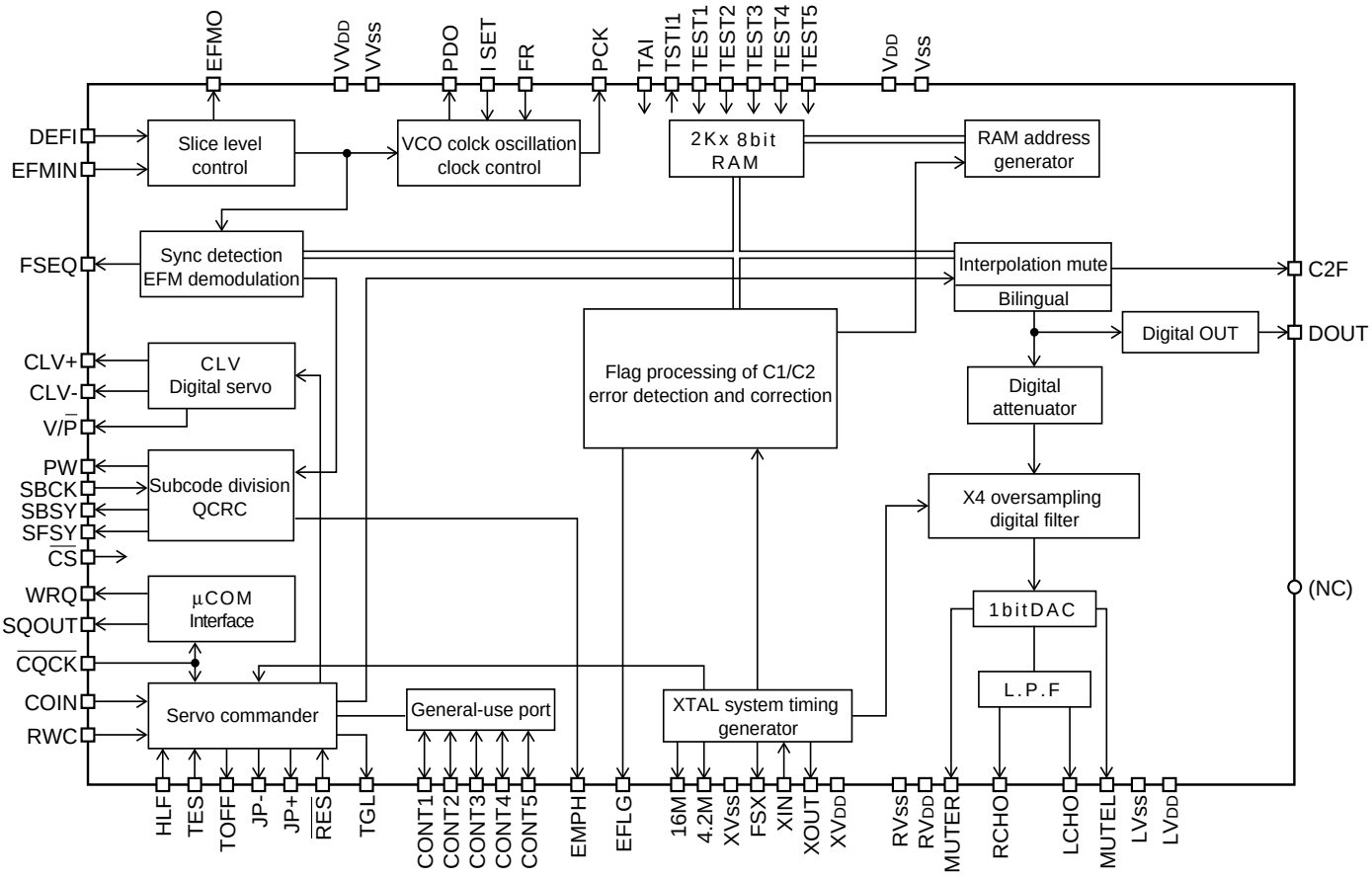


Figure 43 BLOCK DIAGRAM OF IC

IC1 VHiLA9241M/-1:Servo Amp.(LA9241M) (1/2)

Pin No.	Port Name	Function
1	FIN2	Connection pin for photodiode of pickup. RF signal is generated through addition with FIN pin, and FE signal is generated through subtraction.
2	FIN1	Connection pin for photodiode of pickup.
3	E	Connection pin for photodiode of pickup. TE signal is generated through subtraction with F pin.
4	F	Connection pin for photodiode of pickup.
5	TB	Pin for input of DC component of TE signal.
6	TE-	Pin to connect gain setting resistor of TE signal to TE signal.
7	TE	TE signal output pin.
8	TESI	TES (Track error sense) comparator input pin. TE signal is band-passed and input.
9	SCI	Input pin for shock detection.
10	TH	Pin to set time constant of tracking gain.
11*	TA	TA amplifier output pin.
12	TD-	Pin to compose tracking phase compensation constant between TD and VR pins.
13	TD	Pin to set tracking phase compensation.
14	JP	Pin to set amplitude of tracking jump signal (kick pulse).
15	TO	Tracking control signal output pin.
16	FD	Focusing control signal output pin.
17	FD-	Pin to compose focusing phase compensation constant between FD and FA pins.
18	FA	Pin to compose focusing phase compensation constant between FD-/FA-pins.
19	FA-	Pin to compose focusing phase compensation constant between FA and FE pins.
20	FE	Output pin of FE signal.
21	FE-	Pin to connect gain setting resistor of FE signal across TE pin.
22	AGND	GND for analog signal.
23	SP	Single and output for CV+ and CV- pin input.
24	SPI	Spindle amplifier input.
25	SPG	Pin to connect gain setting resistor in the 12cm mode of spindle.
26	SP-	Pin to connect spindle phase compensation constant together with SPD pin.
27	SPO	Spindle control signal output pin.
28	SLEO	Pin to connect thread phase compensation constant.
29	SLD	Thread control signal output pin.
30	SL-	Input pin of thread feed signal from micro computer.
31	SL+	Input pin of thread feed signal from micro computer.
32	JP-	Input pin of tracking jump signal from DSP.
33	JP+	Input pin of tracking jump signal from DSP.
34	TGL	Input pin of tracking gain control signal from DSP. TGL = Gain low at "H"
35	TOFF	Input pin of tracking off control signal from DSP. TOFF = Off at "H"
36	TES	Output pin of TES signal to DSP.
37	HFL	(HIGH FREQUENCY LEVEL) is used to judge whether main beam is positioned on the bit or on the mirror.
38	SLOF	Thread servo off control input pin.
39	CV-	Pin to input CLV error signal from DSP.
40	CV+	Pin to input CLV error signal from DSP.
41	RFSM	RF output pin.
42	RFS-	Pin to set gain of RF and set 3T compensation constant together with RFSM pin.
43	SLC	(SLICE LEVEL CONTROL) is the output pin to control of the level of the data slice with RF waveform DSP.
44	SLI	Input pin to control the level of data slice with DSP.
45	DGND	GND pin in the digital system.
46	FSC	Output pin for focus search smoothening capacitor.
47	TBC	(Tracking Balance Control) Pin to set EF balance variable range.
48*	NC	No connect.
49	DEF	Defect detection output pin of disk.
50	CLK	Reference clock input pin. 4.23MHz of DSP is input.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC1 VHiLA9241M/-1:Servo Amp.(LA9241M) (2/2)

Pin No.	Port Name	Function
51	CL	Micro computer command clock input pin.
52	DAT	Micro computer command data input pin.
53	CE	Micro computer command chip enable input pin.
54	DRF	(DETECT RF) RF level detection output.
55	FSS	(Focus Serch Select) Pin to switch focus search mode. (± search/+ search for reference voltage)
56	VCC2	VCC pin for servo system and digital system.
57	REFI	Pin to connect pass control for reference voltage.
58	VR	Reference voltage output pin.
59	LF2	Pin to set defect detection time constant of disk.
60	PHI	Pin to connect capacitor for peak hold of RF signal.
61	BHI	Pin to connect capacitor for bottom hold of RF signal.
62	LDD	APC circuit output pin.
63	LDS	APC circuit output pin.
64	VCC1	RF system VCC pin.

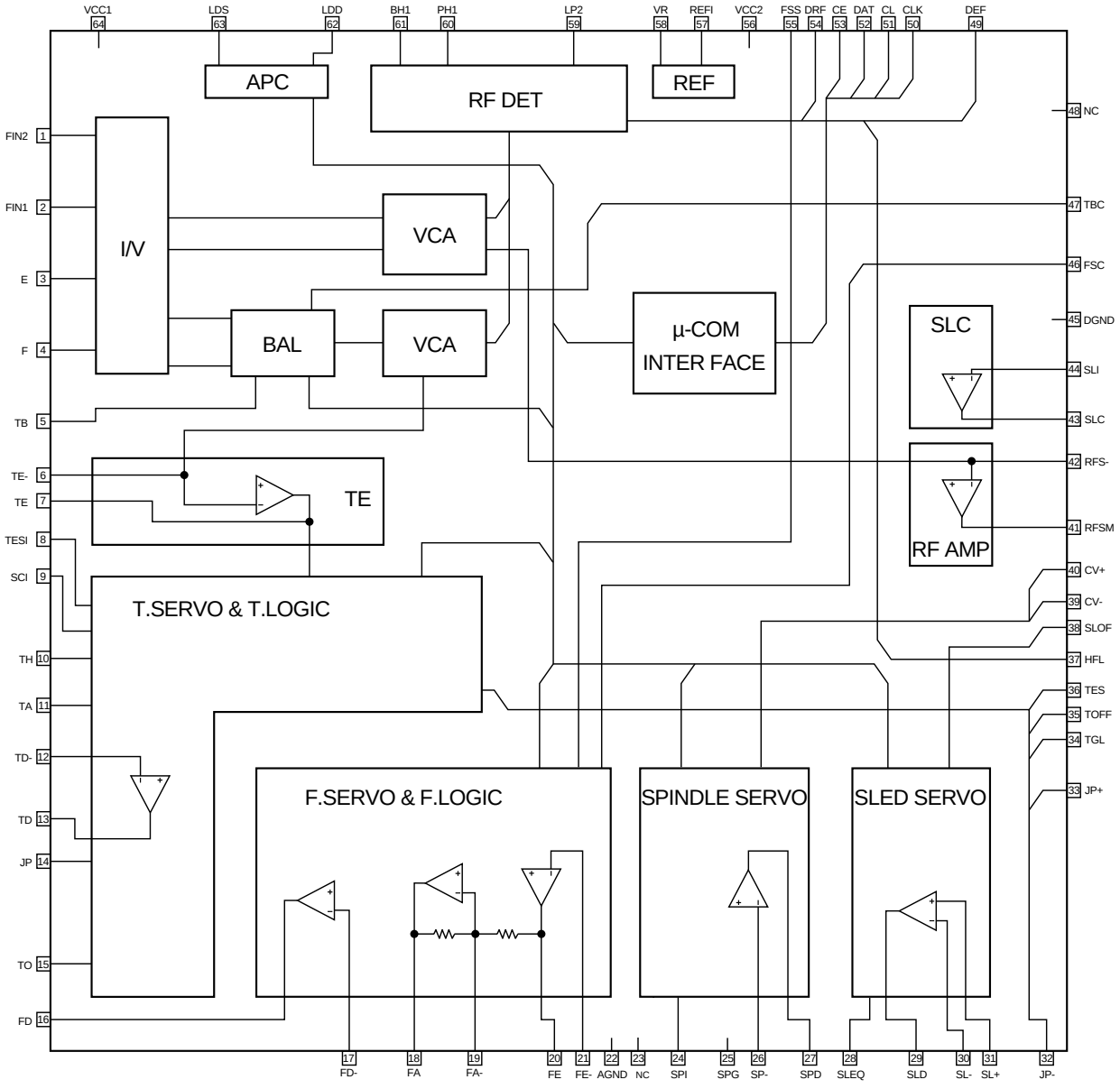


Figure 45 BLOCK DIAGRAM OF IC

IC601 RH-iX0225AWZZ:Main System Microcomputer (IX0225AW) (1/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
1*	P94		Output	Not used OUT:H OPEN
2	P93	T_RECPLY	Output	REC/P.B Selection
3*	P92		Output	Not used OUT:H OPEN
4*	P91	MUT	Output	CD Mute Contorol
5	P90	DSPRES	Output	Reset Output For CD Display
6	P81	SLM2	Output	CD Slide Motor–
7	P80	SLM1	Output	CD Slide Motor+
8	VDD	VDD	—	Power Terminal
9	SCK0	CD CQCK	Output	Clock Output For CD
10	SO0	CD COOUT	Output	Data Output For CD
11	SI0	CD SQIN	Input	Data Input From CD
12	P24	WRQ	Input	CD WRQ
13	P23	RWC	Output	CD WRC
14	SCK1	MAIN SCK	Input	System Microcomputer Clock
15	SO1	MAIN SO	Output	System Microcomputer Data Output
16	SI1	MAIN SI	Input	System Microcomputer Data Input
17	RESET	RESET	Input	Reset
18	P74	MAIN_ST	Input	System Microcomputer Stove Input
19	P73	PUINSW	Input	CD PUIN–SW
20	AVSS	AVSS	—	Analog Ground
21	P17	FRF	Input	Detecting of CD RF Level
22	P16	T1FAS	Input	TAPE1 Full Auto Stop, Pulse Input
23	ANI5	T2 RUN	Input	TAPE2 RUN Pulse Input
24-28	ANI4-0		Output	Not used OUT:H OPEN
29	AVDD	AVDD	—	Analog VDD
30	AVREF	AVREF	—	Analog Ref Potential
31	P04	CAM SW	Input	TAPE CAM–SW
32*	XT2		Output	Not used OPEN
33	VSS	VSS	—	GND Potential
34	X1	X1	Input	Main Clock 4.19MHz
35	X2	X2	Output	Main Clock 4.19MHz
36*	P37	LMUTE	Output	LINE MUTE
37*-38*	P36-35		Output	Not used OUT:H OPEN
39*	P34	SMUTE	Output	System Mute
40*	P33		Output	Not used OUT:H OPEN
41*-43*	P32-30		Output	Not used OUT:L OPEN
44	P03	SP_DET	Input	Detecting of SP Output Error
45	P02	STANBY	Output	Setting Power Control
46*	P01	SPRLY	Output	SP Output Relay Control
47	P00	T2CRO2	Input	TAPE2 Detecting of Chrome Tape
48	IC	IC		Internally Connected
49*	P72		Output	Not used OUT:L OPEN
50	P71	T_SOL	Output	TAPE Solenoid Control
51	P70	T_MOTOR	Output	TAPE Motor Control
52	VDD	VDD		+Power Supply
53	P127		Input	CD TRAY Open/Close SW
54	P126		Input	CD TRAY Disc No,SW
55	P125		Input	CD Mechanizm Detecting of Up/Down chucking
56	P124	T1CRO2	Input	TAPE1 Detecting of CrO2 TAPE
57*-60*	P123-120		Output	Not used OUT:H OPEN
61*	P117		Output	Not used OUT:H OPEN
62*	P116	SPN_P	Input	Tuner Span Selection

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC601 RH-iX0225AWZZ:Main System Microcomputer (IX0225AW) (1/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
63*	P115		Output	Not used OUT:H OPEN
64	P114	SRS_P	Input	SRS exsists or not exist
65*-66*	P113-112		Output	Not used OUT:H OPEN
67	P111	FPA	Input	TAPE2 A Side Proof Roof
68*	P110		Output	Not used OUT:H OPEN
69*	P107	TAMUTE	Output	TAPE Playback Mute
70	P106	T_T1T2	Output	T1/T2 Selection
71	VSS	VSS	–	GND Potential
72	P105	T_BIAS	Output	Recording Bias Control
73*	P104	SRS ON OFF	Output	SRS ON/OFF Control
74*	P103	SRS 1/2	Output	SRS Mode Control
75*	P102	BEAT CUT	Input	TAPE Beat Cut Control
76*-77*	P101-100		Output	Not used OUT:H OPEN
78*	P97		Input	Not used OUT:H OPEN
79*	P96	CRO2	Output	TAPE Playback EQ Selection
80	P95	RECMUTE	Output	Tape Recording Mute

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

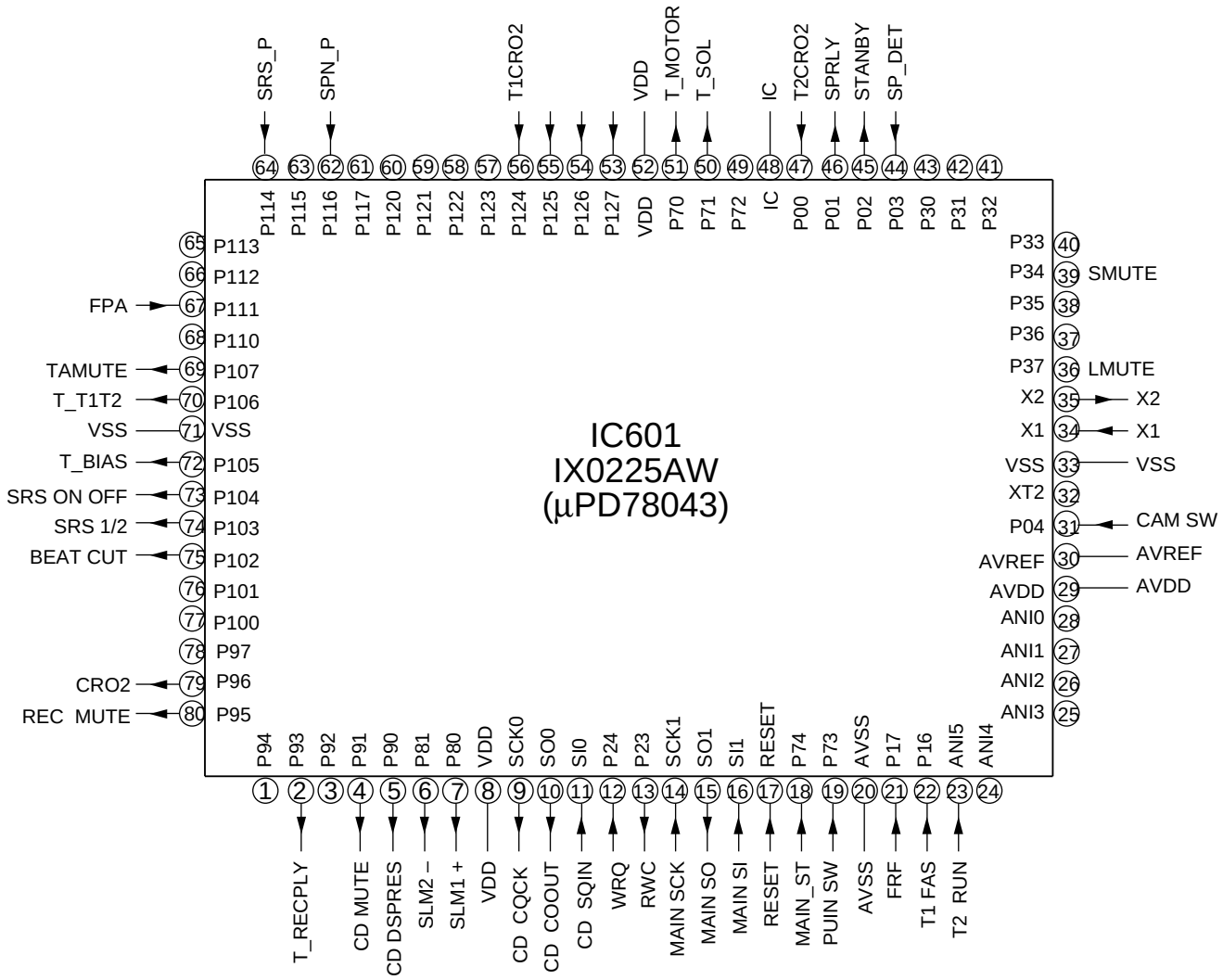


Figure 47 BLOCK DIAGRAM OF IC

IC701 RH-iX0223AWZZ:System Microcomputer (IX0223AW) (1/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
1-7	FIP6-0	G06-00	Output	–
8	VDD	VDD	—	+Power Supply
9	SCK0	C2B CLK	Output	C2B Serial Clock Output
10	SO0	C2B DO	Output	C2B Serial Data Output
11	SI0	C2B DI	Input	C2B Serial Data Input
12	P24	C2B CE	Output	C2B Serial CE Output
13	P23	SUB STB	Output	Serial Stove Output For CD/TAPE Microcomputer
14	SCK1	SUB SCK	Output	Serial Clock Output For CD/TAPE Microcomputer
15	SO1	SUB SO	Output	Serial Data Output For CD/TAPE Microcomputer
16	SI1	SUB SI	Input	Serial Data Input For CD/TAPE Microcomputer
17	RESET	RESET	Input	Reset Input
18	P74	SUB RES	Output	Reset Output For CD/TAPE Microcomputer
19	P73	TUN MUTE	Output	Tuner Tun Mute Output
20	AVSS	AVSS	—	A/D Converter Analog Power
21	P17	TUN SD	Intput	
22	ANI6	TUN SM	Input	Tuner Signal Meter Input
23	ANI5	KEY IN5	Input	Key input 37 to 45
24	ANI4	KEY IN4	Input	Key input 28 to 36
25	ANI3	KEY IN3	Input	Key input 19 to 27
26	ANI2	KEY IN2	Input	Key input 10 to 18
27	ANI1	KEY IN1	Input	Key input 1 to 9
28	ANI0	ENF IN	Input	Tuner Initial setting input
29	AVDD	AVDD	—	A/D Converter Analog +Power
30	AVREF	AVREF	—	A/D Converter Reference Input
31	XT1	VSS	Input	Sub-clock Input Connect with VSS
32*	XT2	N.C	Output	Sub-clock Output OPEN
33	VSS	VSS	—	Connect with GND
34	X1	X1	Input	Main Clock 4.19MHz
35	X2	X2	Output	Main Clock 4.19NHz
36*	P37	LED LCK	Output	LED IC Serial Clock Output BU2092 LCK
37*	P36	LED DATA	Output	LED IC Serial Data Output BU2092 Data
38*	P35	LED CLK	Output	LED IC Serial Clock Output BU2092 CLK
39*	P34		Output	Not used OUT:L OPEN
40*	P33		Output	Not used OUT:L OPEN
41*	P32		Output	Not used OUT:L OPEN
42*	P31	SYS MUTE	Output	System Mute Output
43	P30	POWER	Output	Power Output
44	P03/INTP3	AP_P	—	H: CD-C451 Mode LC75396 L: CD-C431 Mode LC75394
45*	P02	**	Output	Not used OUT:L OPEN
46	INTP1	SYS STOP	Input	Power Failure Input
47	INTP0	REM IN	Input	Remote Control Input
48	IC	VSS	—	Connect with GND
49*	P72	**	Output	Not used OUT:L OPEN
50*	P71	**	Output	Not used OUT:L OPEN
51*	P70	**	Output	Not used OUT:L OPEN
52	VDD	VDD	—	+Power Supply
53*	P127	**	Input	Not used OUT:H OPEN
54-70	FIP32-16	S21-05	Output	FL Display Segment Drive
71	VLOAD	VLOAD	—	FL Drive –Power,to be connected to –30V
72-76	FIP15-11	S04-00	Output	FL Display Segment Drive
77-80	FIP10-7	G10-07	Output	FL Display Grid Drive

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

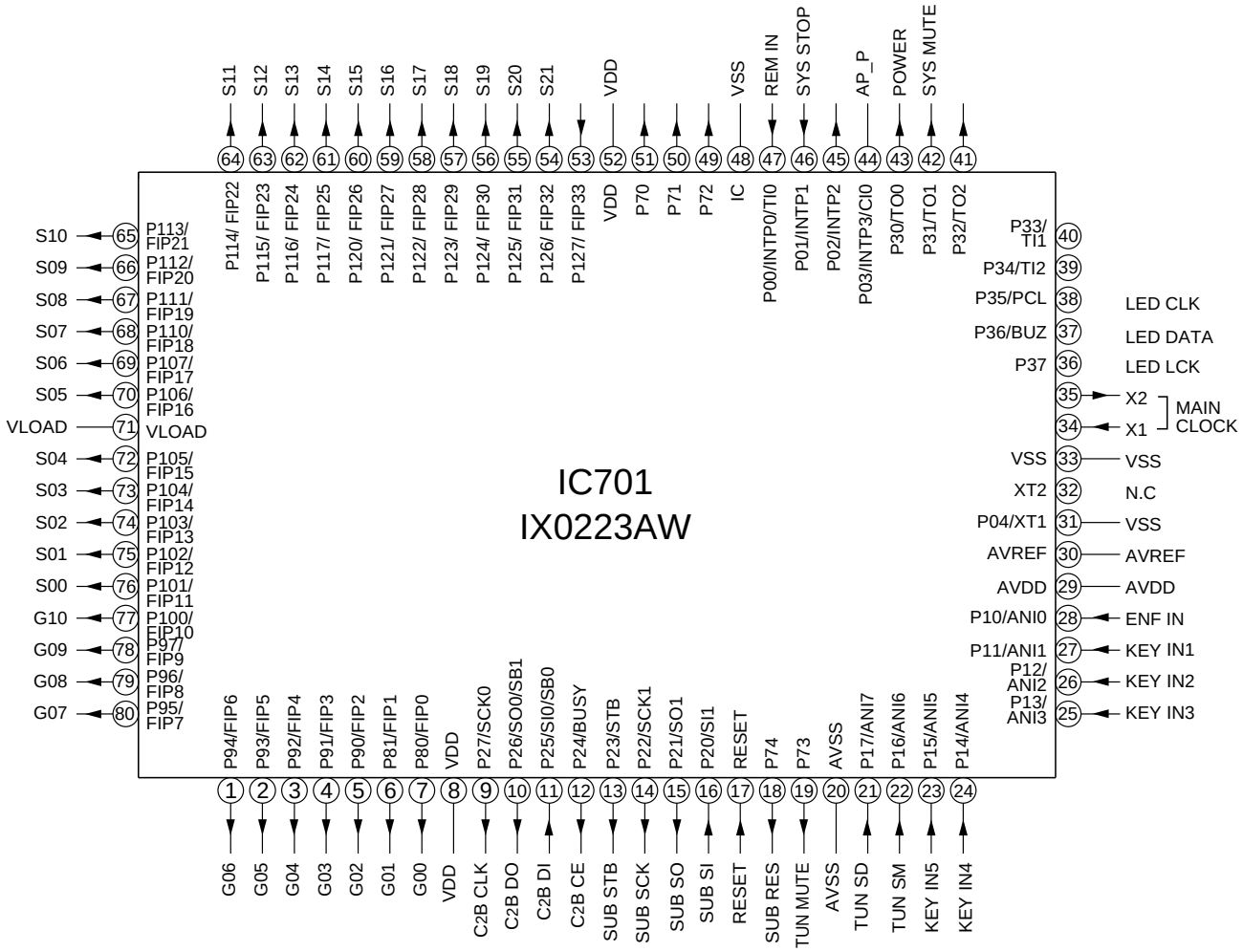


Figure 49 BLOCK DIAGRAM OF IC

IC5 VHiM56748FP-1: Focus/Tracking/Spin/Slide Driver (M56748FP)

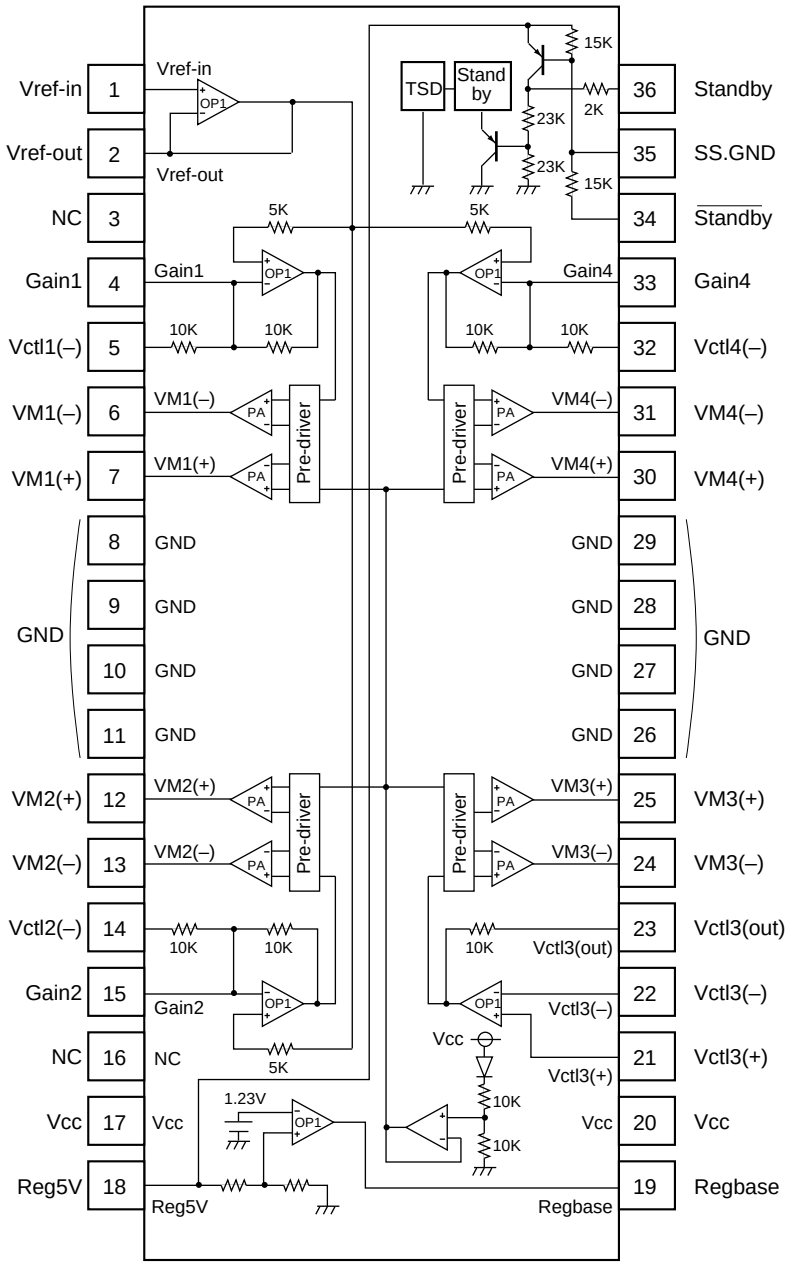


Figure 48-1 BLOCK DIAGRAM OF IC5

FL701 : VVKBJ549GK-/1 FL Display

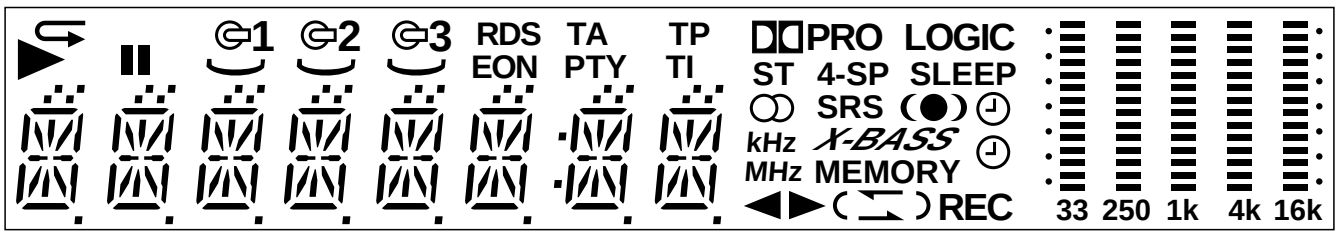


Figure 48-2 FL DISPLAY

IC5 VHiM56748FP-1: Focus/Tracking/Spin/Slide Driver (M56748FP)

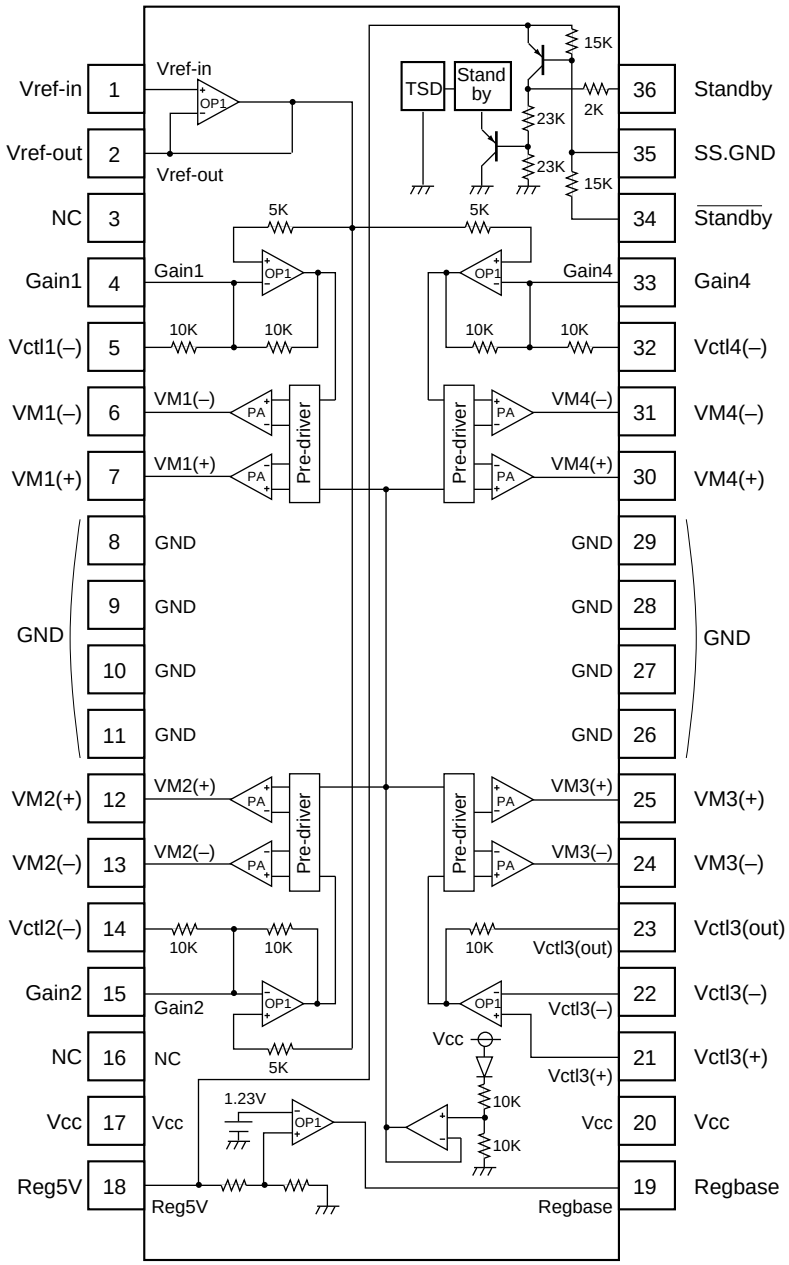


Figure 48-1 BLOCK DIAGRAM OF IC5

FL701 : VVKBJ549GK-/1 FL Display

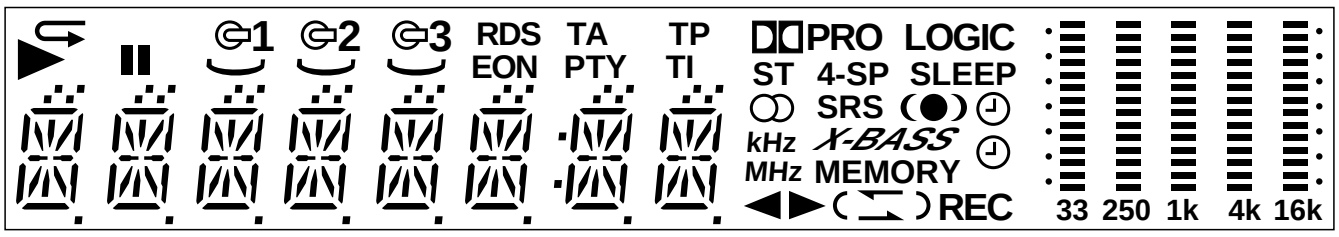


Figure 48-2 FL DISPLAY

SHARP PARTS GUIDE

MODEL CD-C421H

CP-C421H and SURROUND
(GBOXS00018AWZZ)Constitute CD-C421H.

CD-C411H

CP-C411H Constitute CD-C411H.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. No.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC ..... Ceramic type
VCK ..... Ceramic type
VCT ..... Semiconductor type
VC••MF ..... Cylindrical type (without lead wire)
VC••MN ..... Cylindrical type (without lead wire)
VC••TV ..... Square type (without lead wire)
VC••TQ ..... Square type (without lead wire)
VC••CY ..... Square type (without lead wire)
VC••CZ ..... Square type (without lead wire)
VC•••••••••J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD ..... Carbon-film type
VRS ..... Carbon-film type
VRN ..... Metal-film type
VR••MF ..... Cylindrical type (without lead wire)
VR••MN ..... Cylindrical type (without lead wire)
VR••TV ..... Square type (without lead wire)
VR••TQ ..... Square type (without lead wire)
VR••CY ..... Square type (without lead wire)
VR••CZ ..... Square type (without lead wire)
VR•••••••••J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.

NOTE:
Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
INTEGRATED CIRCUITS				
IC1	VHILA9241M/-1	J	AS	Servo Amp.,LA9241M
IC2	VHILC78622K-1	J	AY	Servo/Signal Control,LC78622K
IC5	VHIM56748FP-1	J	AR	Focus/Tracking/Spin/Slide Driver,M56748FP
IC91	VHITA7291S/-1	J	AH	Loading Motor Driver, TA7291S
IC302	VHILC72131/-1	J	AP	PLL (Tuner) LC72131
IC303	VHILA1832//-1	J	AR	FM IF Det./FM Mpx./ AM IF, LA1832
IC401	VHILC75394E-1	J	AX	Audio Processor LC75394E
IC501	VHIAN7345K/-1	J	AM	Playback and Record/ Playback Amp.,AN7345K
IC601	RH-IX0225AWZZ	J	BC	Main System Microcomputer, IX0225AW
IC701	RH-IX0223AWZZ	J	BC	System Microcomputer, IX0223AW
IC941	VHIKIA7812P-1	J	AE	Voltage Regulator,KIA7812P
IC942	VHIKIA7805P-1	J	AF	Voltage Regulator,KIA7805P
IC961	VHILA4450//-1	J	AH	Power Amp.,LA4450 [CD-C421H]
IC961	VHILA4451//-1	J	AN	Power Amp.,LA4451 [CD-C411H]
ICT21	VHILC72720/-1	J	AW	RDS Decorder,LC72720
TRANSISTORS				
Q1	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q91	VSKTA1271Y/-1	J	AC	Silicon,PNP,KTA1271 Y
Q93	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q301	VS2SC380-O/-1	J	AC	Silicon,NPN,2SC380 O
Q353,354	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q360	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q361	VSKRC107M//-1	J	AC	Digital,NPN,KRC107 M
Q371	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q511~514	VS2SC1845F/-1	J	AC	Silicon,NPN,2SC1845 F
Q515,516	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q565	VSKRC104M//-1	J	AC	Digital,NPN,KRC104 M
Q566	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q571	VSKTC3203Y/-1	J	AC	Silicon,NPN,KTC3203 Y
Q575,576	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q581	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q582,583	VSKRC104M//-1	J	AC	Digital,NPN,KRC104 M
Q584	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q601	VSKTA1273Y/-1	J	AE	Silicon,PNP,KTA1273 Y
Q602	VS2SB561-C/-1	J	AC	Silicon,PNP,2SB561 C
Q701	VSKRC107M//-1	J	AC	Digital,NPN,KRC107 M
Q702	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q703,704	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q901	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q941	VS2SD2012Y/-1	J	AF	Silicon,NPN,2SD2012 Y
QT21	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
DIODES				
D2	VHD1SS133//-1	J	AA	Silicon,1SS133
D6	VHD1SS133//-1	J	AA	Silicon,1SS133
D7	VHD1SS133//-1	J	AA	Silicon,1SS133
D81	VHD1SS133//-1	J	AA	Silicon,1SS133
D91	VHD1SS133//-1	J	AA	Silicon,1SS133
D301~304	VHD1SS133//-1	J	AA	Silicon,1SS133
D351~353	VHD1SS133//-1	J	AA	Silicon,1SS133
D401	VHD1SS133//-1	J	AA	Silicon,1SS133
D601,602	VHD1SS133//-1	J	AA	Silicon,1SS133
D701~705	VHD1SS133//-1	J	AA	Silicon,1SS133
⚠ D901~904	VHDRL203F//-1	J	AE	Silicon,RL203F [CD-C411H]
⚠ D901~904	VHD1N5402M/-1	J	AE	Silicon,1N5402M [CD-C421H]
⚠ D905~908	VHDRL104A//-1	J	AB	Silicon,RL104A
D909~911	VHDRL104A//-1	J	AB	Silicon,RL104A
D941~943	VHD1SS133//-1	J	AA	Silicon,1SS133
VD301	VHCKV1236Z23F	J	AS	Variable Capacitance, KV1236Z23F
ZD352	VHEMTZJ3R9B-1	J	AC	Zener,3.9V,MTZJ3.9B
ZD701	VHEMTZJ3R9B-1	J	AC	Zener,3.9V,MTZJ3.9B
ZD901	VHEMTZJ6R2A-1	J	AA	Zener,6.2V,MTZJ6.2A
ZD902	VHEMTZJ300B-1	J	AB	Zener,30V,MTZJ30B
ZDT21	VHEMTZJ5R1B-1	J	AC	Zener,5.1V,MTZJ5.1B
ZDT351	VHEMTZJ5R1B-1	J	AC	Zener,5.1V,MTZJ5.1B
FILTERS				
CF301,302	RFILF0072AFZZ	J	AG	FM IF
CF351	RFILF0003AWZZ	J	AK	FM IF
CF352	RFILA0009AWZZ	J	AE	AM IF
TRANSFORMERS				
⚠ PT901	RTRNP0218AWZZ	J	BF	Power [CD-C421H]
⚠ PT901	RTRNP0220AWZZ	J		Power [CD-C411H]
T302	RCILA1064AFZZ	J	AD	AM Antenna
T306	RCILB1074AFZZ	J	AC	OSC,AM
T351	RCILI0011AWZZ	J	AD	AM IF
COILS				
L1	VP-CH270K0000	J	AB	2.7 µH,Choke
L341	RBLN-0001AWZZ	J	AD	Balun
L342	VP-DH2R2K0000	J	AB	2.2 mmH,Peaking
L351,352	VP-DH101K0000	J	AB	100 µH,Choke
L353	VP-DH102K0000	J	AB	1 mH,Choke
L354	RFILL0001AWZZ	J	AE	Low Pass Filter
L501	VP-DH331K0000	J	AB	330 µH
L601	VP-CH101K0000	J	AB	100 µH,Choke
L701	VP-DH101K0000	J	AB	100 µH,Choke
L702	VP-XHR82K0000	J	AC	0.82 µH
L901	RCILZ0008AWZZ	J	AH	Core
L942	VP-DH1R5K0000	J	AC	1.5 µH
L961,962	RCILZ0137AFZZ	J	AA	0.29 µH
L963	VP-DH2R2K0000	J	AB	2.2 mmH,Peaking
LT21,22	VP-XH2R2K0000	J	AB	2.2 µH,Choke
VARIABLE RESISTOR				
VR351	RVR-M0026AWZZ	J	AC	10 kohm (B),Semi-VR [FM Mute Level]
VIBRATORS				
X351	92LCRSTL1425A	J	AF	Crystal,456 kHz
X352	RCRSP0002AWZZ	J	AH	Crystal,4.5 MHz
XL1	92LCRSTL1746AT	J	AH	Crystal,16.93 MHz
XL601	92LCRSTL-1595A	J	AE	Crystal,4.19 MHz
XL701	RCRSP0003AWZZ	J	AH	Crystal,4.19 MHz
XT21	RCRSB0030AWZZ	J	AH	Crystal,4.332 MHz
CAPACITORS				
C1	VCTYMN1CY103N	J	AA	0.01 µF,16V
C2	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C3	VCEAZA1HW104M	J	AB	0.1 µF,50V,Electrolytic
C4	VCKYMN1HB102K	J	AA	0.001 µF,50V
C5,6	VCTYPA1CX333K	J	AA	0.033 µF,16V
C7	VCEAZA1HW104M	J	AB	0.1 µF,50V,Electrolytic
C8	VCTYPA1CX683K	J	AA	0.068 µF,16V
C9	VCTYPA1CX473K	J	AA	0.047 µF,16V
C10	VCKYMN1HB181K	J	AA	180 pF,50V
C11	VCTYPA1CX104K	J	AB	0.1 µF,16V
C12	VCKYMN1HB331K	J	AA	330 pF,50V
C13	VCTYPA1CX104K	J	AB	0.1 µF,16V
C14	VCTYMN1CY103K	J	AA	0.01 µF,16V
C15	VCTYMN1CX472K	J	AA	0.0047 µF,16V
C16	VCKYMN1HB102K	J	AA	0.001 µF,50V
C17	VCEAZA1HW474M	J	AB	0.47 µF,50V,Electrolytic
C18	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C19	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C20	VCTYMN1CX332K	J	AA	0.0033 µF,16V
C21	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C22	VCTYMN1CY103N	J	AA	0.01 µF,16V
C24	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C25	VCTYMN1CY103N	J	AA	0.01 µF,16V
C30	VCCSMN1HL2R2C	J	AB	2.2 pF,50V
C31	VCTYMN1CX272K	J	AA	0.0027 µF,16V
C32	VCCSMN1HL270J	J	AA	27 pF,50V
C33	VCKYMN1HB102K	J	AA	0.001 µF,50V
C34	VCTYPA1CX333K	J	AA	0.033 µF,16V
C35	VCEAZA1HW104M	J	AB	0.1 µF,50V,Electrolytic
C37	VCEAZA0JW227M	J	AC	220 µF,6.3V,Electrolytic
C38	VCTYMN1CY103K	J	AA	0.01 µF,16V
C39	VCEAZA1HW474M	J	AB	0.47 µF,50V,Electrolytic
C40	VCEAZA1HW334M	J	AB	0.33 µF,50V,Electrolytic
C41,42	VCTYPA1CX473K	J	AA	0.047 µF,16V
C43,44	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C45	VCEAZA1EW475M	J	AC	4.7 µF,25V,Electrolytic
C50	VCTYPA1CX104K	J	AB	0.1 µF,16V

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
C51	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C52	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C53	VCKYMN1HB221K	J	AA	220 pF,50V
C54~57	VCKYMN1HB101K	J	AA	100 pF,50V
C59	VCKZPA1HF223Z	J	AA	0.022 µF,50V
C67,68	VCEAZA1CW106M	J	AC	10 µF,16V,Electrolytic
C69,70	VCKYMN1HB221K	J	AA	220 pF,50V
C91	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C92	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C93,94	VCKYMN1HB102K	J	AA	0.001 µF,50V
C96	VCKYBT1HB102K	J	AA	0.001 µF,50V
C301	VCKYMN1HB102K	J	AA	0.001 µF,50V
C321	VCEAZA1CW107M	J	AC	100 µF,16V,Electrolytic
C323	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C330	VCCUMN1HJ100J	J	AA	10 pF (UJ),50V
C331	VCKYPA1HF473Z	J	AB	0.047 µF,50V
C332	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C334	VCCUMN1HJ180J	J	AA	18 pF (UJ),50V
C335	VCCCMN1HH180J	J	AA	18 pF (CH),50V
C336	VCKYMN1HB471K	J	AA	470 pF,50V
C337	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C338	VCKYMN1HB102K	J	AA	0.001 µF,50V
C341,342	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C343	VCCSMN1HL330J	J	AA	33 pF,50V
C345~347	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C350,351	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C352	VCEAZA1CW106M	J	AC	10 µF,16V,Electrolytic
C353,354	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C355	VCCSMN1HL220J	J	AA	22 pF,50V
C356	VCKYMN1HB102K	J	AA	0.001 µF,50V
C357	VCEAZA1HW225M	J	AB	2.2 µF,50V,Electrolytic
C358	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C361	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C362	VCEAZA1HW335M	J	AB	3.3 µF,50V,Electrolytic
C363	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C364	VCEAZA1CW106M	J	AC	10 µF,16V,Electrolytic
C365	VCTYPA1CX223K	J	AA	0.022 µF,16V
C366	VCKYMN1HB102K	J	AA	0.001 µF,50V
C367,368	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C369	VCCSBT1HL270J	J	AA	27 pF,50V
C370~372	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C373,374	VCTYPA1CX333K	J	AA	0.033 µF,16V
C375	VCEAZA1HW335M	J	AB	3.3 µF,50V,Electrolytic
C380	VCEAZA1CW106M	J	AC	10 µF,16V,Electrolytic
C381	VCCCMN1HH120J	J	AA	12 pF (CH),50V
C382	VCCCMN1HH150J	J	AA	15 pF (CH),50V
C384	VCKYMN1HB102K	J	AA	0.001 µF,50V
C385	VCTYMN1CY103K	J	AA	0.01 µF,16V
C386	VCKYMN1HB331K	J	AA	330 pF,50V
C387	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C391	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C392	VCKYMN1HB102K	J	AA	0.001 µF,50V
C393	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C394	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C395	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C396	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C397	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C398	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C399	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C401~408	VCQYKA1HM473K	J	AB	0.047 µF,50V,Mylar
C411,412	VCKYMN1HB391K	J	AA	390 pF,50V
C415,416	VCEAZA1CW226M	J	AC	22 µF,16V,Electrolytic
C417,418	VCKYMN1HB101K	J	AA	100 pF,50V
C421,422	VCEAZA1HW334M	J	AB	0.33 µF,50V,Electrolytic
C423,424	VCQYKA1HM563K	J	AB	0.056 µF,50V,Mylar
C425~428	VCFYHA1HA184J	J	AC	0.18 µF,50V,Thin Film
C429,430	VCTYPA1CX333K	J	AA	0.033 µF,16V
C431,432	VCQYKA1HM392K	J	AA	0.0039 µF,50V,Mylar
C441,442	VCTYMN1CX272K	J	AA	0.0027 µF,16V
C443,444	VCKYMN1HB101K	J	AA	100 pF,50V
C445,446	VCEAZA1CW106M	J	AC	10 µF,16V,Electrolytic
C447~449	VCEAZA1CW226M	J	AC	22 µF,16V,Electrolytic
C450	VCEAZA1CW107M	J	AC	100 µF,16V,Electrolytic
C451,452	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C453	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C454,455	VCEAZA1HW225M	J	AB	2.2 µF,50V,Electrolytic
C456,457	VCKYMN1HB221K	J	AA	220 pF,50V
C458	VCKYPA1HB102K	J	AA	0.001 µF,50V
C501,502	VCKYMN1HB102K	J	AA	0.001 µF,50V
C503,504	VCKYMN1HB331K	J	AA	330 pF,50V
C511,512	VCKYMN1HB181K	J	AA	180 pF,50V
C513,514	VCKYMN1HB102K	J	AA	0.001 µF,50V

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C519,520	VCKYMN1HB331K	J	AA	330 pF,50V
C531,532	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C533,534	VCTYMN0JY183M	J	AA	0.018 µF,6.3V
C535,536	VCKYMN1HB561K	J	AA	560 pF,50V
C537,538	VCTYMN0JY153M	J	AA	0.015 µF,6.3V
C539,540	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C543	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C544	VCEAZA1EW335M	J	AB	3.3 µF,25V,Electrolytic
C553,554	VCKYMN1HB102K	J	AA	0.001 µF,50V
C555,556	VCEAZA1CW226M	J	AC	22 µF,16V,Electrolytic
C557,558	VCTYPA1CX683K	J	AA	0.068 µF,16V
C559,560	VCTYMN1CX332K	J	AA	0.0033 µF,16V
C561,562	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C563	VCTYPA1CX823K	J	AB	0.082 µF,16V
C564	VCEAZA1CW226M	J	AC	22 µF,16V,Electrolytic
C565	VCEAZA1AW227M	J	AC	220 µF,10V,Electrolytic
C566	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C570	VCQYKA1HM392K	J	AA	0.0039 µF,50V,Mylar
C571	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C572	VCQYKA1HM273K	J	AB	0.027 µF,50V,Mylar
C581	VCKZPA1HF473Z	J	AA	0.047 µF,50V
C582	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C583	VCEAZA1CW107M	J	AC	100 µF,16V,Electrolytic
C585,586	VCTYPA1CX222K	J	AA	0.0022 µF,16V
C601	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C602~606	VCKYBT1HB151K	J	AA	150 pF,50V
C607	VCEAZA1AW227M	J	AC	220 µF,10V,Electrolytic
C608	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C609	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C701	VCEAZA0JW227M	J	AC	220 µF,6.3V,Electrolytic
C702	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C703~708	VCKYMN1HB101K	J	AA	100 pF,50V
C709	VCCCMN1HH150J	J	AA	15 pF (CH),50V
C710	VCCCMN1HH180J	J	AA	18 pF (CH),50V
C711	VCEAZA1HW335M	J	AB	3.3 µF,50V,Electrolytic
C712	VCKZPA1HF223Z	J	AA	0.022 µF,50V
C713,714	VCTYMN1CY103N	J	AA	0.01 µF,16V
C715	VCEAZA0JW227M	J	AC	220 µF,6.3V,Electrolytic
C716	VCEAZA0JW107M	J	AC	100 µF,6.3V,Electrolytic
C717	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C718,719	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C720	VCKYMN1HB102K	J	AA	0.001 µF,50V
C901	VCEAZA1VW107M	J	AC	100 µF,35V,Electrolytic
C902~904	VCEAZA1HW476M	J	AB	47 µF,50V,Electrolytic
C905,906	VCEAZA1HW107M	J	AC	100 µF,50V,Electrolytic
C907,908	VCFYHA1HA224J	J	AC	0.22 µF,50V,
C909,910	VCQYKA1HM473K	J	AB	0.047 µF,50V,Mylar
C921,922	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C923,924	VCKYMN1HB102K	J	AA	0.001 µF,50V [CD-C421H]
C923,924	VCTYMN1CX122K	J	AA	0.0012 µF,16V [CD-C411H]
C925,926	VCKYPU1HB332K	J	AA	0.0033 µF,50V [CD-C421H Only]
C941	VCKZPA1HF223Z	J	AA	0.022 µF,50V
C942,943	VCEAZA1CW476M	J	AB	47 µF,16V,Electrolytic
C944	VCQYKA1HM104K	J	AB	0.1 µF,50V,Mylar
C945	VCQYKA1HM223K	J	AB	0.022 µF,50V,Mylar
C946,947	VCQYKA1HM104K	J	AB	0.1 µF,50V,Mylar
C948	VCEAZW1EW338M	J		3300 µF,25V,Electrolytic
C949	VCEAZW1HW228M	J	AH	2200 µF,50V,Electrolytic
C961,962	VCTYMN1CX152K	J	AA	0.0015 µF,16V
C963,964	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C965	VCEAZA1HW107M	J	AC	100 µF,50V,Electrolytic
C966	VCEAZA1HW476M	J	AB	47 µF,50V,Electrolytic
C967	VCEAZA1HW107M	J	AC	100 µF,50V,Electrolytic
C968	VCKYBT1HB102K	J	AA	0.001 µF,50V
C969,970	VCEAZA1HW476M	J	AB	47 µF,50V,Electrolytic
C972	VCKYMN1HB102K	J	AA	0.001 µF,50V
C973	VCEAZA1HW107M	J	AC	100 µF,50V,Electrolytic
C974	VCKZPA1HF223Z	J	AA	0.022 µF,50V
C975,976	VCEAZV1EW108M	J	AE	1000 µF,25V,Electrolytic
C977~980	VCQYKA1HM104K	J	AB	0.1 µF,50V,Mylar
C983	VCQYKA1HM473Z	J		0.047 µF,50V,Mylar
C984	VCQYKA1HM223Z	J		0.022 µF,50V Mylar [CD-C421H Only]
C985	VCQYKA1HM473Z	J		0.047 µF,50V,Mylar
C986,987	VCQYKA1HM223Z	J		0.022 µF,50V Mylar [CD-C421H Only]
C988	VCQYKA1HM473Z	J		0.047 µF,50V,Mylar
C989	VCQYKA1HM223Z	J		0.022 µF,50V Mylar [CD-C421H Only]
C990	VCQYKA1HM473Z	J		0.047 µF,50V Mylar
C991	VCE9AA1HF106M	J	AB	10 µF,50V,Electrolytic (N.P.) [CD-C421H Only]

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
C997	VCKYBT1HB121K	J	AA	120 pF,50V [CD-C421H]
C997	VCKYBT1HB471K	J	AA	470 pF,50V [CD-C411H]
CT21	VCEAZA1AW476M	J		47 µF,10V,Electrolytic
CT22	VCTYMN1EF223Z	J	AA	0.022 µF,25V
CT23	VCEAZA1CW106M	J	AC	10 µF,16V,Electrolytic
CT24	VCTYMN1EF223Z	J	AA	0.022 µF,25V
CT25	VCKYMN1HB561K	J	AA	560 pF,50V
CT26,27	VCCCPA1HH220J	J	AA	22 pF (CH),50V
CT28	VCEAZA1AW476M	J		47 µF,10V,Electrolytic
CT29	VCTYMN1EF223Z	J	AA	0.022 µF,25V
CT36	VCKYPA1HF223Z	J	AB	0.022 µF,50V
CT37	VCTYMN1EF223Z	J	AA	0.022 µF,25V
CT43	VCEAZA1CW106M	J	AC	10 µF,16V,Electrolytic

RESISTORS

	VRD-MN2BD000C	J	AA	0 ohm,Jumper,ø1.4×3.5mm,Ivory
R1	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R2	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R3	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R4	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R5	VRD-MN2BD682J	J	AA	6.8 kohms,1/8W
R6	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R7	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R8	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R9	VRD-MN2BD273J	J	AA	27 kohms,1/8W
R10	VRD-MN2BD823J	J	AA	82 kohms,1/8W
R11	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R12	VRD-MN2BD153J	J	AA	15 kohms,1/8W
R13	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R14	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R15	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R16	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R17	VRD-MN2BD823J	J	AA	82 kohms,1/8W
R18	VRD-ST2CD335J	J	AA	3.3 Mohms,1/6W
R19	VRD-MN2BD393J	J	AA	39 kohms,1/8W
R20	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R21	VRD-MN2BD563J	J	AA	56 kohms,1/8W
R22	VRD-MN2BD682J	J	AA	6.8 kohms,1/8W
R23	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R24	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R25	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R26,27	VRD-ST2CD224J	J	AA	220 kohms,1/6W
R28	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R29	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R30	VRD-MN2BD153J	J	AA	15 kohms,1/8W
R31	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R32	VRD-MN2BD563J	J	AA	56 kohms,1/8W
R33	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R34	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R35	VRD-MN2BD471J	J	AA	470 ohms,1/8W
R36,37	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R38	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R39	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R40	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R41	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R42	VRD-MN2BD561J	J	AA	560 ohms,1/8W
R43	VRD-MN2BD120J	J	AA	12 ohms,1/8W
R45~47	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R54	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R56	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R57	VRD-MN2BD273J	J	AA	27 kohms,1/8W
R58	VRD-MN2BD681J	J	AA	680 ohms,1/8W
R60	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R61	VRD-MN2BD153J	J	AA	15 kohms,1/8W
R70~72	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R73,74	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
R75,76	VRD-MN2BD271J	J	AA	270 ohms,1/8W
R77~79	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R82	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R86~88	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R95	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R96	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R97	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R98	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R99	VRD-ST2EE560J	J	AA	56 ohms,1/4W
R301	VRD-MN2BD331J	J	AA	330 ohms,1/8W
R319	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R323	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R324	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R336	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R344	VRD-MN2BD471J	J	AA	470 ohms,1/8W
R345	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R346	VRD-MN2BD331J	J	AA	330 ohms,1/8W
R347	VRD-MN2BD682J	J	AA	6.8 kohms,1/8W
R348	VRD-MN2BD681J	J	AA	680 ohms,1/8W
R349	VRD-ST2CD330J	J	AA	33 ohms,1/6W
R350	VRD-ST2CD272J	J	AA	2.7 kohms,1/6W
R351	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R352	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R353	VRD-MN2BD271J	J	AA	270 ohms,1/8W
R354	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
R355	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R356	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R357	VRD-ST2CD474J	J	AA	470 kohms,1/6W
R358	VRD-MN2BD822J	J	AA	8.2 kohms,1/8W
R359	VRD-MN2BD182J	J	AA	1.8 kohms,1/8W
R360	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R361,362	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R363,364	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R365,366	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R367	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R368	VRD-ST2CD333J	J	AA	33 kohms,1/6W
R369	VRD-MN2BD820J	J	AA	82 ohms,1/8W
R370~374	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R376	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R377	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R378	VRD-MN2BD823J	J	AA	82 kohms,1/8W
R379	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R380	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R381	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R382	VRD-ST2EE151J	J	AA	150 ohms,1/4W
R383~385	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R387	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R391,392	VRD-ST2EE391J	J	AA	390 ohms,1/4W
R393	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R395	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R401~408	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R411	VRD-ST2CD393J	J	AA	39 kohms,1/6W
R412	VRD-MN2BD393J	J	AA	39 kohms,1/8W
R413,414	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R415,416	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R417,418	VRD-MN2BD153J	J	AA	15 kohms,1/8W
R420,421	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R425~427	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R431,432	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R501,502	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R510	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R511,512	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R513,514	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R515~518	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R519	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R520	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R531,532	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R533,534	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
R535,536	VRD-ST2CD560J	J	AA	56 ohms,1/6W
R537,538	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R539,540	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R541	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R542	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R551,552	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R553,554	VRD-MN2BD682J	J	AA	6.8 kohms,1/8W
R555,556	VRD-MN2BD561J	J	AA	560 ohms,1/8W
R557,558	VRD-MN2BD560J	J	AA	56 ohms,1/8W
R559~561	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R562	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R563	VRD-ST2EE471J	J	AA	470 ohms,1/4W
R565	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R566,567	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R568	VRD-RT2HD151J	J	AA	150 ohms,1/2W
R569	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R570	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R571	VRD-MN2BD120J	J	AA	12 ohms,1/8W
R575,576	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R577	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R578	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R581~584	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R585	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R601	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R602	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R603	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R604	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R605~620	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R621,622	VRD-ST2CD102J	J	AA	1 kohm,1/6W

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
R623	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R624	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R625	VRD-ST2CD123J	J	AA	12 kohms,1/6W
R626	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R627	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R628	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R629	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R630	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R631	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R632	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R633	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R634~636	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R637	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R638~643	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R644	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R701	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R702	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R703	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R705	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R706	VRD-MN2BD182J	J	AA	1.8 kohms,1/8W
R707	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R708	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R709	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R710	VRD-MN2BD182J	J	AA	1.8 kohms,1/8W
R711	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R712	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
R713	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R714	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R715	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R716~719	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R720~725	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R726	VRD-ST2CD101J	J	AA	100 ohm,1/6W
R727,728	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R729	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R730	VRD-MN2BD153J	J	AA	15 kohms,1/8W
R731	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R732~737	VRD-ST2CD822J	J	AA	8.2 kohms,1/6W
R738	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R739,740	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R741	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
R744	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R745	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
R746	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R747	VRD-ST2CD123J	J	AA	12 kohms,1/6W
R748~750	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R751	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R752	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R754	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R756	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R759,760	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R764	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R765	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R766	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R767	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R768,769	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R770	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R788	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R789	VRD-ST2EE120J	J	AA	12 ohms,1/4W
R790	VRD-MN2BD151J	J	AA	150 ohms,1/8W
R791	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R792	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R793	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R794	VRD-MN2BD330J	J	AA	33 ohms,1/8W
R795	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R796	VRD-MN2BD820J	J	AA	82 ohms,1/8W
R797	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R798	VRD-MN2BD224J	J	AA	220 kohms,1/8W
R901	VRD-ST2EE221J	J	AA	220 ohms,1/4W
R902	VRD-ST2CD123J	J	AA	12 kohms,1/6W
R903	VRD-ST2EE221J	J	AA	220 ohms,1/4W
R904	VRD-ST2CD101J	J	AA	100 ohm,1/6W
R905	VRD-ST2CD332J	J	AA	3.3 kohms,1/6W
R906,907	VRD-ST2EE2R2J	J	AA	2.2 ohms,1/4W
R941	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R944	VRD-RT2HD1R0J	J	AA	1 ohm,1/2W
R961,962	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R965,966	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R967,968	VRD-MN2BD221J	J	AA	220 ohms,1/8W
R969	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R971,972	VRD-ST2EE4R7J	J	AA	4.7 ohms,1/4W
R973	VRD-RT2HD271J	J	AA	270 ohms,1/2W
R975	VRD-RT2HD271J	J	AA	270 ohms,1/2W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
R981,982	VRD-RT2HD331J	J	AA	330 ohms,1/2W
R983	VRD-ST2EE2R2J	J	AA	2.2 ohms,1/4W [CD-C411H]
R983	VRD-ST2EE3R3J	J	AA	3.3 ohms,1/4W [CD-C421H]
R984,985	VRD-ST2EE3R3J	J	AA	3.3 ohms,1/4W [CD-C421H Only]
R986	VRD-ST2EE2R2J	J	AA	2.2 ohms,1/4W [CD-C411H]
R986	VRD-ST2EE3R3J	J	AA	3.3 ohms,1/4W [CD-C421H]
RT21	VRD-ST2CD104J	J	AA	100 kohm,1/6W
RT26	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RT28	VRD-MN2BD102J	J	AA	1 kohm,1/8W
RT29	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RT30	VRD-MN2BD102J	J	AA	1 kohm,1/8W
RT32	VRD-ST2CD103J	J	AA	10 kohm,1/6W
RT33,34	VRD-ST2CD563J	J	AA	56 kohms,1/6W
RT35~37	VRD-ST2CD224J	J	AA	220 kohms,1/6W
RT48,49	VRD-ST2EE391J	J	AA	390 ohms,1/4W

OTHER CIRCUITRY PARTS

BIM5/CNS10/CNS5	QCNWN0894AWZZ	J	AH	Connector Ass'y,6-10-2Pin
CNP1	92LCONE5P53253	J	AB	Plug,5Pin
CNP2	92LCONE8P53253	J	AC	Plug,8Pin
CNP3	92LCONE6P53253	J	AC	Plug,6Pin
CNP3A	92LCONE6P53254	J	AC	Plug,6Pin
CNP10	92LCONEAP53253	J	AC	Plug,10Pin
CNP301	92LCONE-2P5268	J	AB	Plug,2Pin
CNP303	QCNCW010MAWZZ	J	AD	Plug,12Pin
CNP501	92LCONE3P5267X	J	AB	Plug,3Pin
CNP502	92LCONE7P5267X	J	AC	Plug,7Pin
CNP901	QCNCM035GAWZZ	J	AC	Plug,7Pin
CNPM1	QCNCM932MAFZZ	J	AE	Plug,12Pin
CNPM2	QCNCM030BAWZZ	J	AB	Pin Holder,2Pin
CNS1A/B	QCNWN0891AWZZ	J	AG	Connector Ass'y,5-5Pin
CNS2A/B	QCNWN0892AWZZ	J	AF	Connector Ass'y,8-8Pin
CNS3A/B	QCNWN0893AWZZ	J	AF	Connector Ass'y,6-6Pin
CNS303	QCNCM010MAWZZ	J	AC	Socket,12Pin
CNS501	QCNWN0895AWZZ	J	AE	Connector Ass'y,3Pin
CNS502	QCNWN0896AWZZ	J	AG	Connector Ass'y,7Pin
CNS601/CNSM1	QCNWN0907AWZZ	J	AC	Connector Ass'y,8-12Pin
CNS901	QCNWN1248AWZZ	J	AK	Connector Ass'y,7-7Pin
CNS902	QCNWN1249AWZZ	J	AE	Flat Wire,5Pin
⚠ F901	92LFUSET312E	J	AD	Fuse,T3.15A L 250V
⚠ F902	92LFUSE-T162-E	J	AD	Fuse,T1.6A L 250V
⚠ F941	92LFUSE-T501E	J	AD	Fuse,T500mA L,250V
FE301	RTUNS0012AWZZ	J	AV	FM Front End
FL701	VVKBJ549GK/-1	J	AX	FL Display
FW701	QCNWN0720AWZZ	J	AD	Flat Cable,3Pin
FW702,703	QCNWN1251AWZZ	J	AE	Flat Wire,9Pin
FWM1	QCNWN1274AWZZ	J	AC	Flat Cable,2Pin
FWM2	QCNWN0338AWZZ	J	AD	Flat Cable,2Pin
JK961	QJAKM0004AWZZ	J	AK	Jack,Headphones
M1	92LMTR1858CASY	J	AS	Motor with Chassis [Disc]
M2	92LMTR1854BASY	J	AP	Motor with Gear [Sled]
M3	92LMTR2037AS1	J	AP	Motor with Pulley [T/T Up/Down Loading]
MM1	RMOTV0006AWM1	J	AR	Motor with Pulley [Tape]
PHM1	VHPI31535CD-1	J	AG	Phote Interrupter
RX701	VHLN63H380A-1	J	AK	Remote Sensor,N63H380A
SO301	QTANC0101AWZZ	J	AF	Terminal,Antenna
SO401	92LJACKL1676A	J	AF	Jack,AUX/VIDEO
⚠ SO901	QSOCA0204AWZZ	J	AF	Socket,AC Power Input
SO961	QTANA0407AWZZ	J	AE	Terminal,Speaker [CD-C411H]
SO961	QTANA0801AWZZ	J	AK	Terminal,Speaker [CD-C421H]
SOLM1	RPLU-0002AWZZ	J	AH	Solenoid Ass'y. [TAPE]
SOLM2	RPLU-0002AWZZ	J	AH	Solenoid Ass'y. [CD]
SW1	QSW-P0004AWZZ	J	AE	Switch,Push Type [Open/Close]
SW2	QSW-F0001AWZZ	J	AD	Switch,Leaf/Skeleton Type [Mecha Up]
SW3	QSW-P0005AWZZ	J	AD	Switch,Push Type [DISC Number]
SW4	QSW-F9001AW01	J	AD	Switch,Leaf Type [Pickup In]
SW701	92LSWITCH1401A	J		Switch,Key Type [ON-STAND-BY]
SW702	92LSWITCH1401A	J		Switch,Key Type [CLOCK]
SW703	92LSWITCH1401A	J		Switch,Key Type [TIMER/SLEEP]
SW704	92LSWITCH1401A	J		Switch,Key Type [CD]
SW705	92LSWITCH1401A	J		Switch,Key Type [TUNER BAND]
SW706	92LSWITCH1401A	J		Switch,Key Type [TAPE]
SW707	92LSWITCH1401A	J		Switch,Key Type [VIDEO/AUX]
SW708	92LSWITCH1401A	J		Switch,Key Type [EON]

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
SW709	92LSWITCH1401A	J		Switch,Key Type [PTY./TI SEARCH]
SW710	92LSWITCH1401A	J		Switch,Key Type [ASPM]
SW711	92LSWITCH1401A	J		Switch,Key Type [DISPLAY MODE]
SW712	92LSWITCH1401A	J		Switch,Key Type [REC PAUSE]
SW713	92LSWITCH1401A	J		Switch,Key Type [TUNING UP/TIME]
SW714	92LSWITCH1401A	J		Switch,Key Type [RANDAM DEMO]
SW715	92LSWITCH1401A	J		Switch,Key Type [VOLUME UP]
SW716	92LSWITCH1401A	J		Switch,Key Type [STOP]
SW717	92LSWITCH1401A	J		Switch,Key Type [FWD]
SW718	92LSWITCH1401A	J		Switch,Key Type [FF/PRESET UP]
SW719	92LSWITCH1401A	J		Switch,Key Type [MEMORY SET]
SW720	92LSWITCH1401A	J		Switch,Key Type [TUNING DOWN/TIME]
SW721	92LSWITCH1401A	J		Switch,Key Type [VOLUME DOWN]
SW722	92LSWITCH1401A	J		Switch,Key Type [X-BASS/EQUALIZER]
SW724	92LSWITCH1401A	J		Switch,Key Type [REV/PRESET DOWN]
SW725	92LSWITCH1401A	J		Switch,Key Type [OPEN/CLOSE]
SW726	92LSWITCH1401A	J		Switch,Key Type [DISC SKIP]
SWM3	92LM-SW1676A	J	AC	Switch,Leaf Type [Fool Proof]
SWM4	QSW-F9003AWZZ	J	AG	Switch,Leaf Type [F.A.S]
SWM5	92LM-SW1658A	J	AB	Switch,Leaf Type [CAM]

CD MECHANISM PARTS

301	NGERH0011AWZZ	J	AC	Gear,Middle
302	NGERH0012AWZZ	J	AC	Gear,Drive
303	MLEVP0010AWZZ	J	AC	Rail,Guide
304	NSFTM0002AWFW	J	AE	Shaft,Guide
305	92LM-CUSN1524A	J	AC	Cushion
⚠306	92LHPC1MASY	J	BG	Pickup Unit Ass'y
306-1	———		—	Pickup Unit (Not Replacement Item)
306-2	NGERR0043AFZZ	J	AC	Gear,Rack
306-3	MSPRC0961AFZZ	J	AA	Spring,Rack
701	XBSSD26P06000	J	AA	Screw,ø2.6×6mm
702	XHBSD20P05000	J	AA	Screw,ø2×5mm
703	XBBSD20P03000	J	AA	Screw,ø2×3mm
704	LX-WZ1070AFZZ	J	AA	Washer,ø1.5×ø3.8×0.25mm
M1	92LMTR1858CASY	J	AS	Motor with Chassis [Disc]
M2	92LMTR1854BASY	J	AP	Motor with Gear [Sled]
SW4	QSW-F9001AW01	J	AD	Switch,Leaf Type [Pickup In]

CABINET PARTS

201	92LCAB2829AS1	J	AV	Front Panel A'ssy [CD-C411H]
201	92LCAB2827AS1	J	AV	Front Panel Ass'y [CD-C421H]
201-1	———		—	Front Panel (Not Replacement Item)
201-2	JKNBZ0473AWSA	J	AD	Button [OPEN/CLOSE]
201-3	PCUSG0022AWZZ	J	AB	Cushion,Leg
202	LHLDM1003AWZZ	J	AF	Stabilizer
203	92LMECHA2823A	J	BL	Cassette Mechanism Ass'y
203-1	NBLTK0011AWZZ	J	AC	Belt,Main,Tape 1
203-2	NBLTK0012AWZZ	J	AB	Belt,Main,Tape 2
203-3	NBLTK0030AWZZ	J	AC	Belt,Sub
203-4	NROLY0002AWZZ	J	AF	Pinch Roller Ass'y
203-5	RHEDA0001AWZZ	J	AG	Head,Erase
203-6	92LMRPH1746A	J	AM	Haed,Record/Playback [Tape 1/Tape 2]
203-7	RMOTV0006AWM1	J	AR	Motor with Pulley [TAPE], [MM1]
203-8	RPLU-0002AWZZ	J	AH	Solenoid Ass'y [TAPE], [SOLM1]
204	92LN-BAND1318A	J	AA	Nylon Band,80mm
205	GCAB-1044AWSA	J	AM	Cabinet,CD Player Base
206	GCAB-1050AWSB	J	AS	Top Cabinet
207	GCOVA1186AWSB	J	AF	Cover,CD Tray Panel,Left
208	GCOVA1187AWSB	J	AF	Cover,CD Tray Panel,Right
209	GCOVA1199AWSA	J	AG	Cover,CD Tray [CD-C421H]
209	GCOVA1215AWSA	J		Cover,CD Tray [CD-C411H]
210	GDORF0054AWSB	J	AL	Cassette Holder,Tape 1
211	GDORF0055AWSB	J	AL	Cassette Holder,Tape 2
212	GITAR0355AWSA	J	AK	Back Board,For U.K. [CD-C421H]
212	GITAR0356AWSA	J	AH	Back Board,For U.K. [CD-C411H]
212	GITAR0357AWSA	J		Back Board,For Germany [CD-C411H]
212	GITAR0359AWSA	J	AL	Back Board,For Germany [CD-C421H]
213	GITAS0050AWSB	J	AM	Side Panel,Left
214	GITAS0051AWSB	J	AM	Side Panel,Right
215	HDECQ0296AWSA	J	AF	Panel,Cassette,Tape 1
216	HDECQ0297AWSA	J	AF	Panel,Cassette,Tape 2
217	HDECQ0299AWSA	J	AG	CD Top Panel
218	HDECQ0366AWSA	J		Display Panel [CD-C411H]
218	HDECQ0368AWSA	J	AM	Display Panel [CD-C421H]
219	JKNBZ0516AWSB	J	AG	Button Function
220	JKNBZ0517AWSB	J	AF	Button [X-BASS]
221	JKNBZ0518AWSA	J	AD	Button [CLOCK/TIMER/SLEEP]
222	JKNBZ0519AWSA	J	AH	Button,OPERATION A
223	JKNBZ0520AWSA	J	AH	Button,OPERATION B
224	JKNBZ0521AWSA	J	AE	Button [TUNING/TIME]
225	JKNBZ0522AWSA	J	AE	Button [RANDOM/DEMO]
226	LANGF0032AWZZ	J	AC	Support,T/T Lock Lever
227	LANGT0051AWFW	J	AF	Bracket,Heat Sink [CD-C421H]
227	LANGT0052AWFW	J		Bracket,Heat Sink [CD-C411H]
228	LCHSM0074AWFW	J	AS	Chassis,Bottom
229	LCHSZ0010AWZZ	J	AM	Chassis,Loading
230	LCHSZ0011AWZZ	J	AG	Chassis,CD Mechanism
231	LHLDZ1143AWZZ	J	AD	Holder,FL Display
232	LHLDZ1139AWSA	J	AD	Support,Stabilizer
233	LHLDZ1140AWZZ	J	AB	Guide
234	LHLDZ1141AWZZ	J	AB	Support,Pitch
235	MLEVP0066AWZZ	J	AE	Lever,Shift
236	MLEVP0067AWZZ	J	AC	Lever,Lock
237	MLEVP0068AWZZ	J	AB	Lever,Change
238	MLEVP0070AWZZ	J	AB	Lever,T/T Lock
239	MLIFP0003AWZZ	J	AE	Damper
240	MSPRC0020AWFJ	J	AB	Spring,T/T Lock Lever
241	MSPRC0024AWFW	J	AB	Spring,Solenoid
242	MSPRD0044AWFJ	J	AB	Spring,Lock Lever
243	MSPRD0092AWFJ	J	AB	Spring,Cassette,Tape 1
244	MSPRD0093AWFJ	J	AB	Spring,Cassette,Tape 2
245	NBLTK0029AWZZ	J	AB	Belt,Drive
246	NGERH0064AWZZ	J	AD	Gear,Cam
247	NGERH0065AWZZ	J	AB	Gear,Turntable
248	NGERK0003AWZZ	J	AC	Gear,Drive
249	NGERK0004AWZZ	J	AB	Gear,Bevel
250	NGERK0005AWZZ	J	AB	Gear,Loading
251	NGERW0006AWZZ	J	AC	Gear,Worm Wheel
252	NPLYD0001AWZZ	J	AB	Pulley
253	NROLP0009AWZZ	J	AB	Roller
254	NTNT-0018AWSA	J	AK	Turntable
255	PCUSG0022AWZZ	J	AB	Cushion
256	PRDAR0113AWFW	J	AV	Heat Sink [CD-C421H]
256	PRDAR0118AWFW	J	AT	Heat Sink [CD-C411H]
⚠257	QFSHD0001AWZZ	J	AB	Holder,Fuse
258	QLUGP0001AWZZ	J	AC	Lug Terminal [Lug 961,962]
259	PSLDM3015AWFW	J	AD	Shield Plate
260	LANGT0049AWFW	J	AK	Bracket,Tuner and Main PWB
261	LANGT0050AWFW	J	AG	Bracket,Tuner PWB
262	92LCAUT1706A1	J	AC	Label,CD Laser Caution
263	92LCAUT1706B	J	AA	Label,CD Laser Caution Mark
264	PMAGF0001AWZZ	J	AF	Magnet
265	92LSUPT1749D	J	AA	Support,Magnet
267	TLABS0076AWZZ	J	AB	Label,BEAB,for U.K. Only
601	LX-EZ0005AWFD	J	AA	Screw,Special
602	LX-JZ0002AWFD	J	AA	Screw,ø3×10mm
603	LX-JZ0003AWFF	J	AA	Screw,ø3×12mm
604	LX-JZ0022AFFD	J	AA	Screw,ø3×8mm
605	LX-TZ0019AFZZ	J	AB	Screw,Special
606	XBPSD26P05JS0	J	AA	Screw,ø2.6×5mm
607	XEBSD26P12000	J	AA	Screw,ø2.6×12mm
608	XEBSD30P10000	J	AA	Screw,ø3×10mm
609	XEBSD30P12000	J	AA	Screw,ø3×12mm
610	XHBSD40P08000	J	AA	Screw,ø4×8mm
611	XEBSF30P10000	J	AA	Screw,ø3×10mm
612	XEBSF30P12000	J	AA	Screw,ø3×12mm
613	XESSD30P10000	J	AA	Screw,ø3×10mm
614	XHBSF30P08000	J	AA	Screw,ø3×8mm
615	XJBSD30P08000	J	AA	Screw,ø3×8mm
616	XJBSD30P10000	J	AA	Screw,ø3×10mm
617	XJSSF30P10000	J	AA	Screw,ø3×10mm
618	XWHJZ62-09510	J	AB	Washer,ø6.2×ø10×0.9mm

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
619	XJBSF30P10000	J	AA	Screw,ø3×10mm
620	XJBSF30P08000	J	AA	Screw,ø3×8mm

SPEAKER BOX PARTS FRONT SPEAKER [CP-C421H]

901	999723001006	J	BB	Speaker Box Ass'y.
902	199731800070	J	AV	Net Frame Ass'y.
903	151731801046	J	AS	Duct Panel
904	135604141031	J	AB	Screw,ø4×14mm
905	137640631110	J		Label,Specification
906	109760021039	J	AF	Port Cushion
SP1,2	VSP0010WBV36A	J	AZ	Speaker,Woofer
SP3,4	VSP0050TBK66A	J	AS	Speaker,Tweeter

SPEAKER BOX PARTS FRONT SPEAKER [CP-C411H]

901	J1730A	J		Net Frame Ass'y
902	8510	J		Speaker Box Ass'y
903	D4675EA	J		Speaker Cord
904	P5859-1	J		Label,Specification
905	J1729A	J		Panel,Duct
906	J9797	J		Port Cushion
907	J1731	J		Support,Woofer
908	F3075	J		Screw,ø4×35mm
SP1,2	VSP0010PBV48A	J		Speaker,Woofer

SPEAKER BOX PARTS SURROUND (GBOXS0018AWZZ) [CD-C421H Only]

901	92L291-0061	J	AM	Speaker Cord
902	92L121-0069	J	AN	Net Frame Ass'y.
903	92L314-0035	J		Bottom Cabinet
904	92L351-0320	J		Label,Specification
905	92L372-0028	J	AB	Screw,ø3×20mm
SP1,2	VSP0010PBS8WA	J	AM	Speaker,Full Range

ACCESSORIES/PACKING PARTS [CD-C421H]

1	SPAKP0013AWZZ1	J	AC	Polyethylene Bag,Unit
2	SPAKA0197AWZZ	J	AN	Packing Add.,Unit,Left/Right
3	SPAKZ0383AWZZ	J	AB	Sheet
4	SPAKC0671AWZZ	J	AX	Packing Case
5	TLABE0246AWZZ	J	AB	Label,Bar Code
6	92LBAG1770A	J	AB	Polyethylene Bag,AC Power Supply Cord [U.K. Only]
7	QACCB0004AW00	J	BB	AC Power Supply Cord,for U.K.
7	QACCE0007AW00	J	AH	AC Power Supply Cord,for Germany
8	92LBAG1460C1	J	AB	Polyethylene Bag,Operation Manual
9	QANTL0005AWZZ	J	AG	AM Loop Antenna
10	92LF-ANT1535A	J	AF	FM Antenna
11	TGAN-3170UMZZ	J	AE	Warranty Card [U.K. Only]
12	TINSE0221AWZZ	J	AG	Operation Manual for U.K.
12	TINSZ0324AWZZ	J	AP	Operation Manual for Germany
13	UBATU0001AWZZ	J	AE	Battery,UM/SUM-3 [Germany Only]
14	RRMCG0144AWSA	J	AX	Remote Control
14-1	92LLID1782A	J	AQ	Battery Lid,Remote Control
15	SPAKZ0393AWZZ	J	AD	Protection Pad
16	138735601059	J		Polyethylene Bag,Front Speaker
17	137640521112	J		Label,Feature
18	139764081026	J	AN	Packing Add.,Top,Front Speaker
19	139764081027	J	AN	Packing Add.,Bottom,Front Speaker
20	92L411-0063	J	AB	Polyethylene Bag,Surround Speaker
21	92L412-0064	J	AQ	Packing Add.,Top and Bottom,Surround Speaker

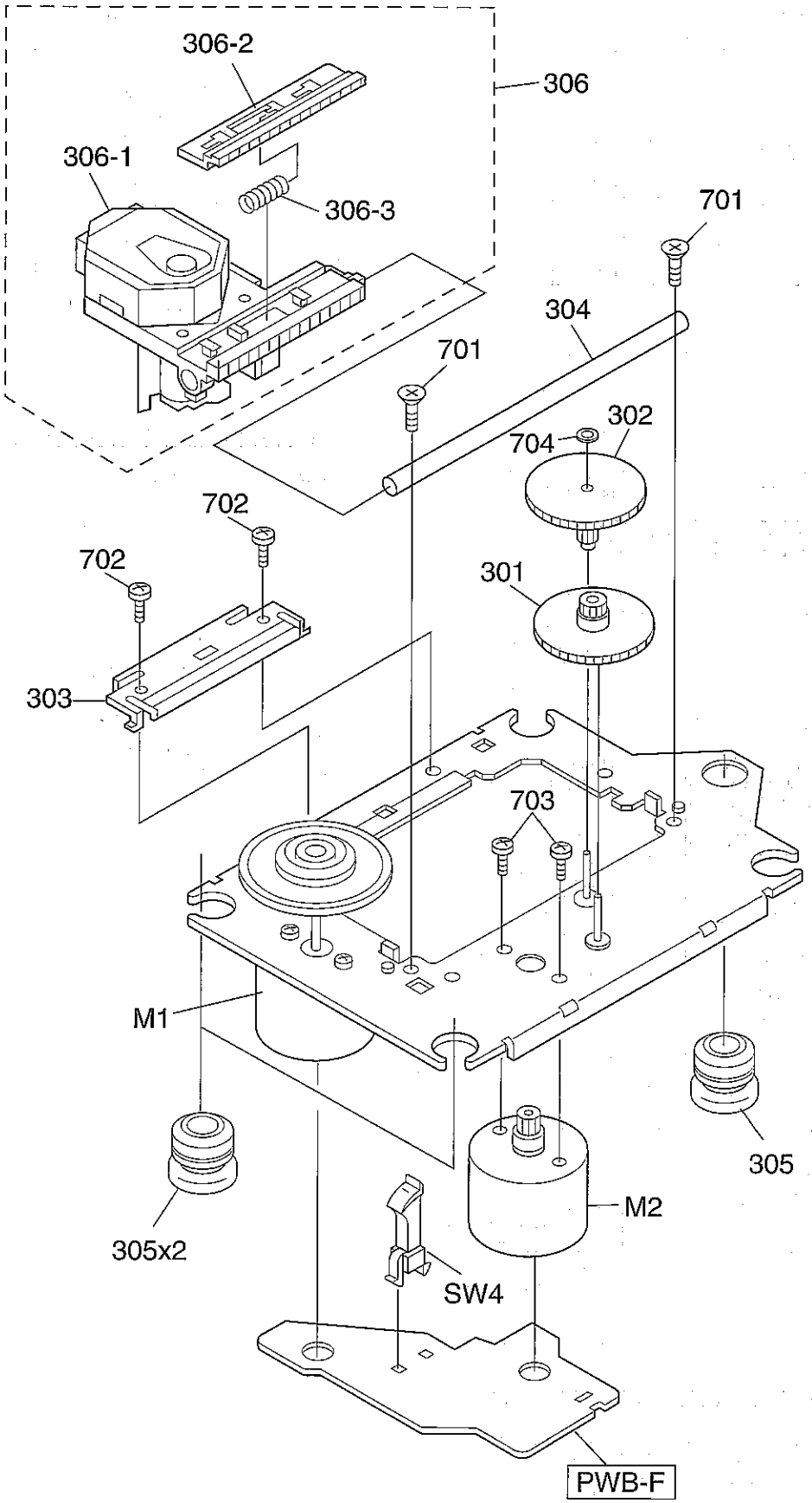
ACCESSORIES/PACKING PARTS [CD-C411H]

1	SPAKP0013AWZZ1	J	AC	Polyethylene Bag,Unit
2	SPAKA0197AWZZ	J	AN	Packing Add.,Unit,Left/Right
3	SPAKZ0383AWZZ	J	AB	Sheet
4	SPAKC0669AWZZ	J		Packing Case
5	TLABE0230AWZZ	J	AB	Label,Bar Code
6	92LBAG1770A	J	AB	Polyethylene Bag,AC Power Supply Cord [U.K. Only]
7	QACCB0004AW00	J	BB	AC Power Supply Cord,for U.K.
7	QACCE0007AW00	J	AH	AC Power Supply Cord,for Germany
8	92LBAG1460C1	J	AB	Polyethylene Bag,Operation Manual
9	QANTL0005AWZZ	J	AG	AM Loop Antenna
10	92LF-ANT1535A	J	AF	FM Antenna
11	TGAN-3170UMZZ	J	AE	Warranty Card [U.K. Only]
12	TINSE0220AWZZ	J		Operation Manual,for U.K.
12	TINSZ0323AWZZ	J		Operation Manual,for Germany
12	TINSZ0373AWZZ	J		Operation Manual,for Russia
13	UBATU0001AWZZ	J	AE	Battery,UM/SUM-3 [Germany Only]
14	RRMCG0144AWSA	J	AX	Remote Control
14-1	92LLID1782A	J	AQ	Battery Lid,Remote Control
15	SPAKZ0393AWZZ	J	AD	Protection Pad
16	92L411-0064	J	AE	Polyethylene Bag,Front Speaker
17	P9819	J		Label,Feature
18	N1869	J		Packing Add,Top and Bottom, Front Speaker

P.W.B. ASSEMBLY (Not Replacement Item)

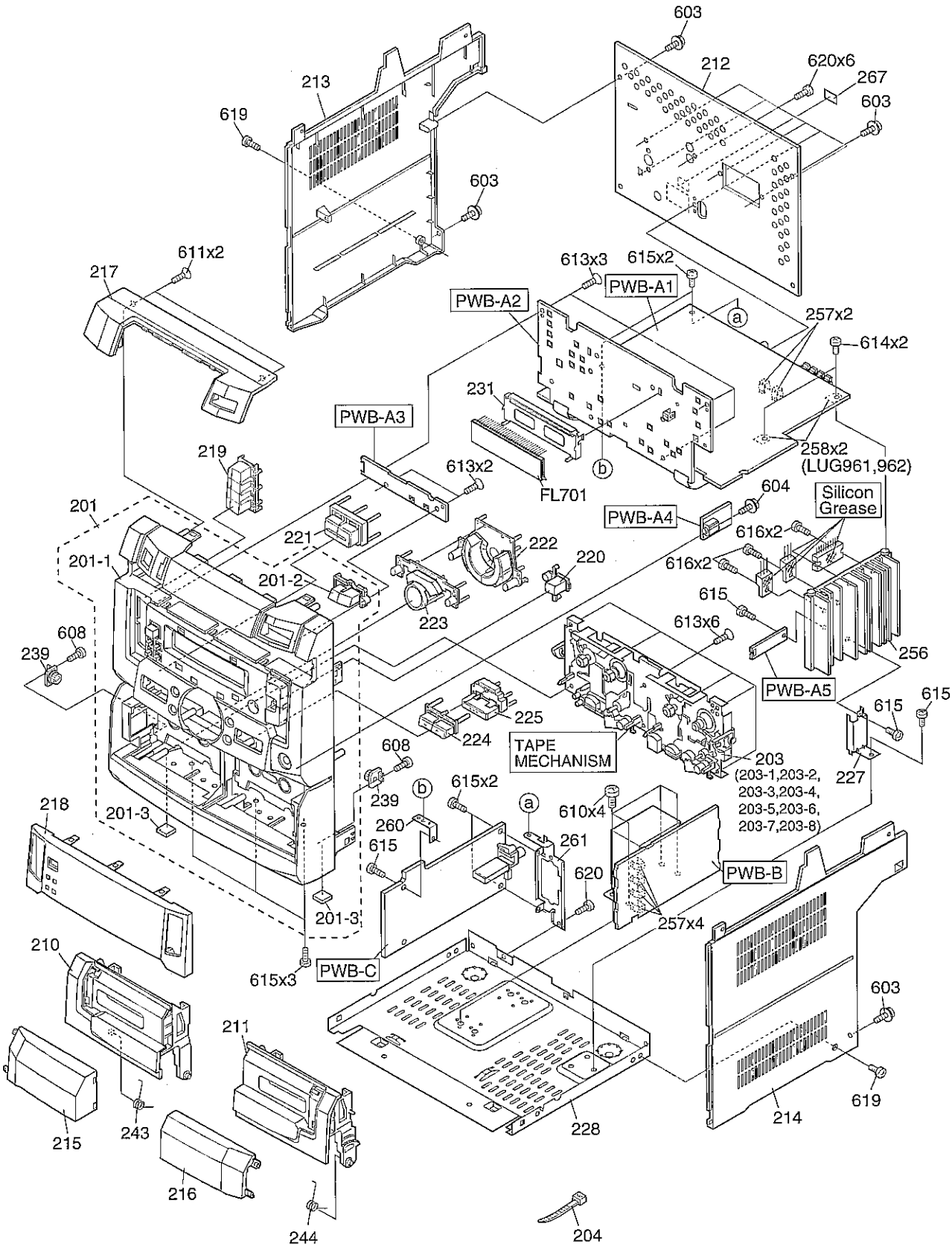
PWB-A1~5	92LPWB2827MANS	J	–	Main/Display/Switch/Headphone Wire Holder (Combined Ass'y) [CD-C421H], Except for Germany
PWB-A1~5	92LPWB2829MANS	J	–	Main/Display/Switch/Headphone Wire Holder (Combined Ass'y) [CD-C411H], Except for Germany
⚠ PWB-B	92LPWB2827PWRS	J	–	Power [CD-C421H], Except for Germany
⚠ PWB-B	92LPWB2829PWRS	J	–	Power [CD-C411H], Except for Germany
PWB-C	92LPWB2827TUNS	J	–	Tuner, Except for Germany
PWB-D	QPWBF0106AWZZ	J	AF	Tape Mechanism (PWB Only)
PWB-E	QPWBF0341AWZZ	J	AB	Sensor (PWB Only)
PWB-F	QPWBF0027AWZZ	J	AD	CD Motor (PWB Only)

CD-C421H/C411H

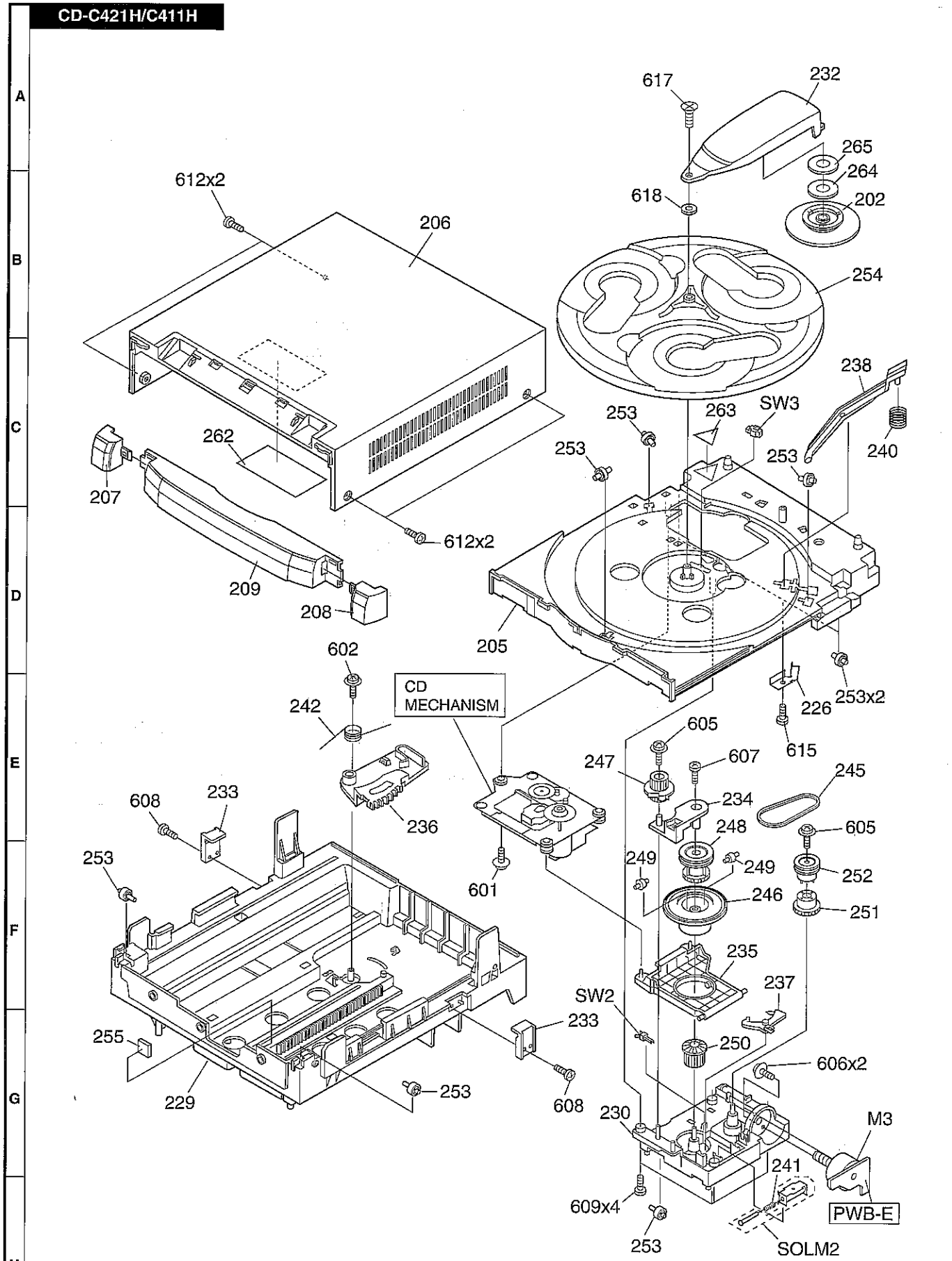


CD MECHANISM EXPLODED VIEW

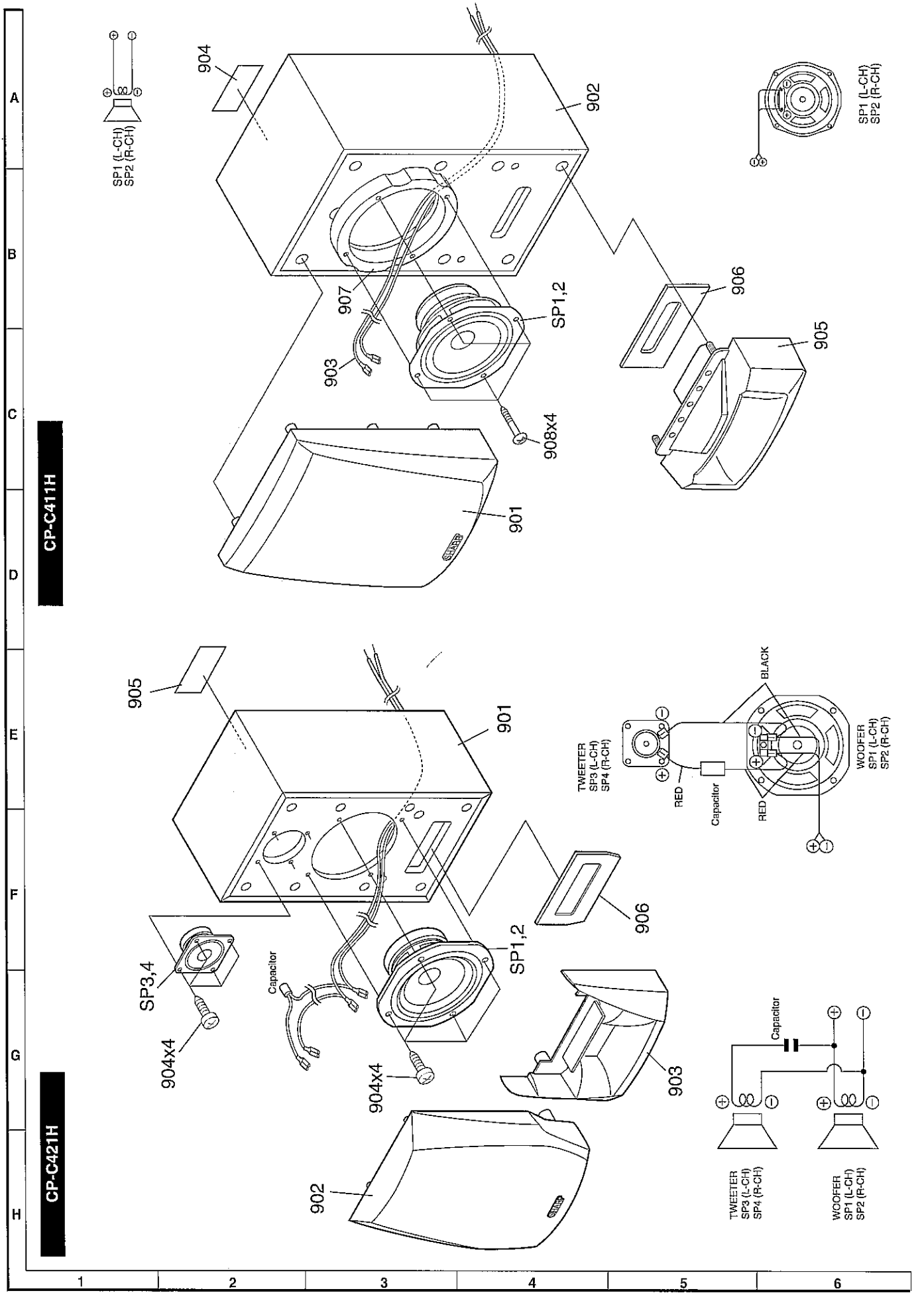
CD-C421H/C411H



CABINET EXPLODED VIEW (1/2)



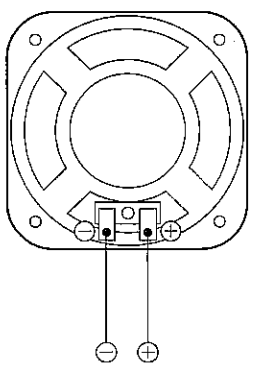
CABINET EXPLODED VIEW (2/2)

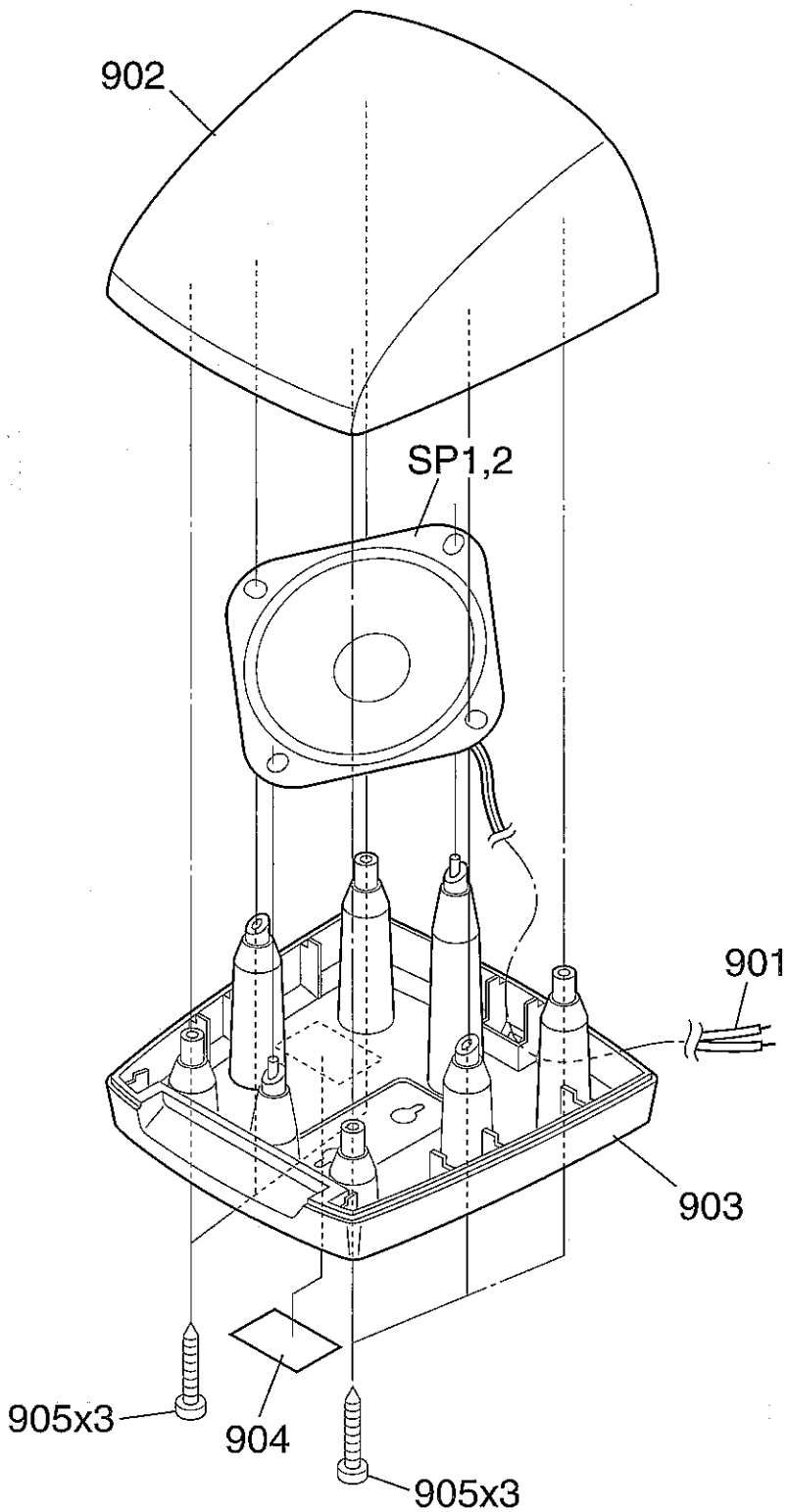


SPEAKER EXPLODED VIEW (1/2)

SURROUND SPEAKER SYSTEM

(CD-C421H Only)



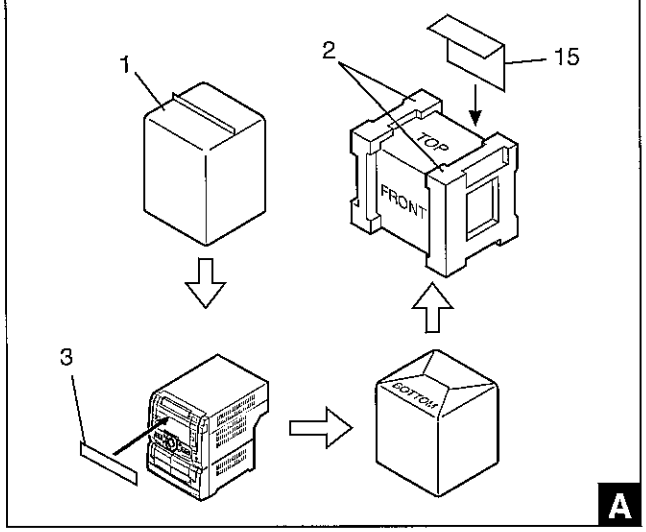


SPEAKER EXPLODED VIEW (2/2)

PACKING OFF THE SET (FOR U.K. ONLY)

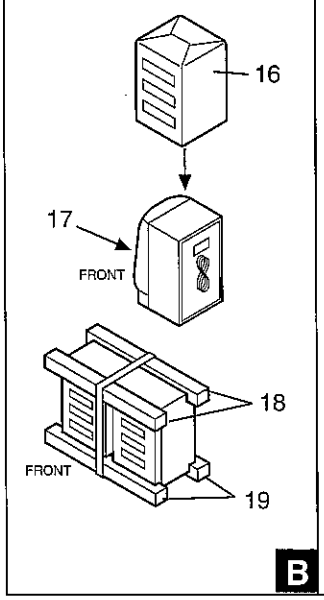
Setting position of switches and knobs	
Tape Mechanism	STOP

Unit — CD-C421H/C411H

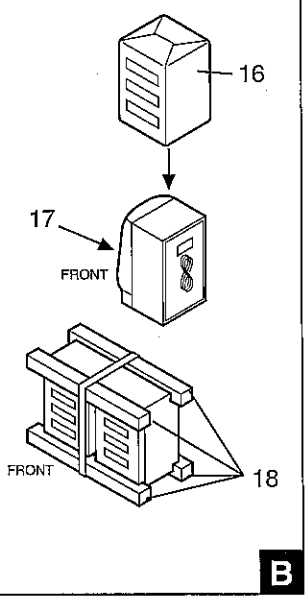


Front Speaker(L/R)

CP-C421H

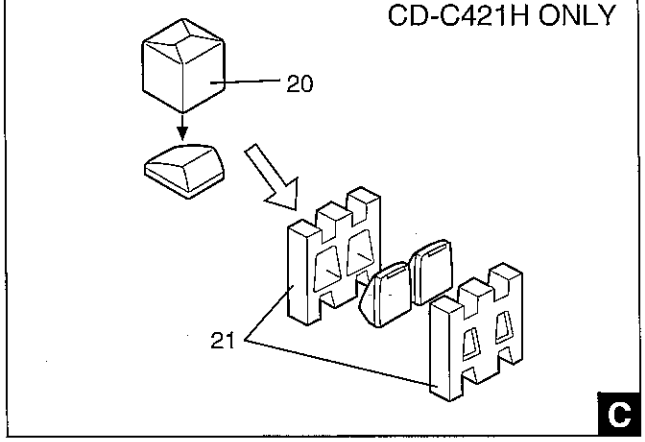


CP-C411H



Surround Speaker(L/R) GBOXS00018AWZZ

CD-C421H ONLY



CD-C421H/C411H

1.Polyethylene Bag	SPAKP0013AWZZ1
2.Packing Add.	SPAKA0197AWZZ
3.Seet	SPAKZ0383AWZZ
4.Packing Case:CD-C421H	SPAKC0671AWZZ
4.Packing Case:CD-C411H	SPAKC0669AWZZ
5.Label,Bar Code:CD-C421H	TLABE0246AWZZ
5.Label,Bar Code:CD-C411H	TLABE0230AWZZ
6.Polyethylene Bag,AC Plug	92LBAG1770A
7.AC Power Cord	QACCB0004AW00
8.Polyethylene Bag,Operation Manual	92LBAG1460C1
9.AM Loop Antenna	QANTL0005AWZZ
10.FM Antenna	92LF-ANT1535A
11.Warranty Card	TGAN-3170UMZZ
12.Operaton Manual:CD-C421H	TiNSE0221AWZZ
12.Operaton Manual:CD-C411H	TiNSE0220AWZZ
14.Remote Control	RRMCG0144AWSA
15.Protection Pad	SPAKZ0393AWZZ

CP-C421H

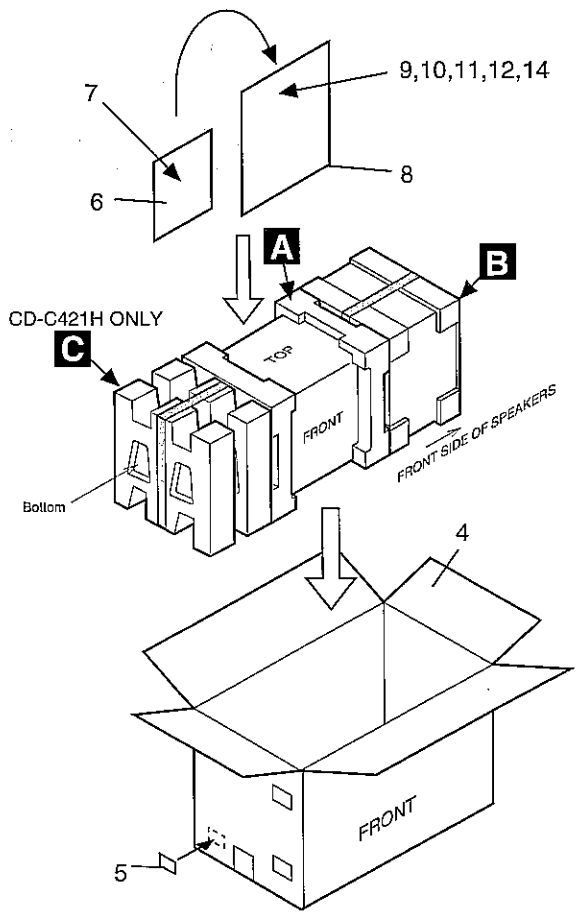
16.Polyethylene Bag	92L411-0064
17.Label,Feature	137640521112
18.Packing Add.,Top	139764081026
19.Packing Add.,Bottom	139764081027

CP-C411H

16.Polyethylene Bag	92L411-0064
17.Label,Feature	P9819
18.Packing Add.,Top and Bottom	N1869

SURROUND SPEAKER SYSTEM **CD-C421H ONLY**

20.Polyethylene Bag	92L411-0063
21.Packing Add.,Top and Bottom	92L412-0064



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